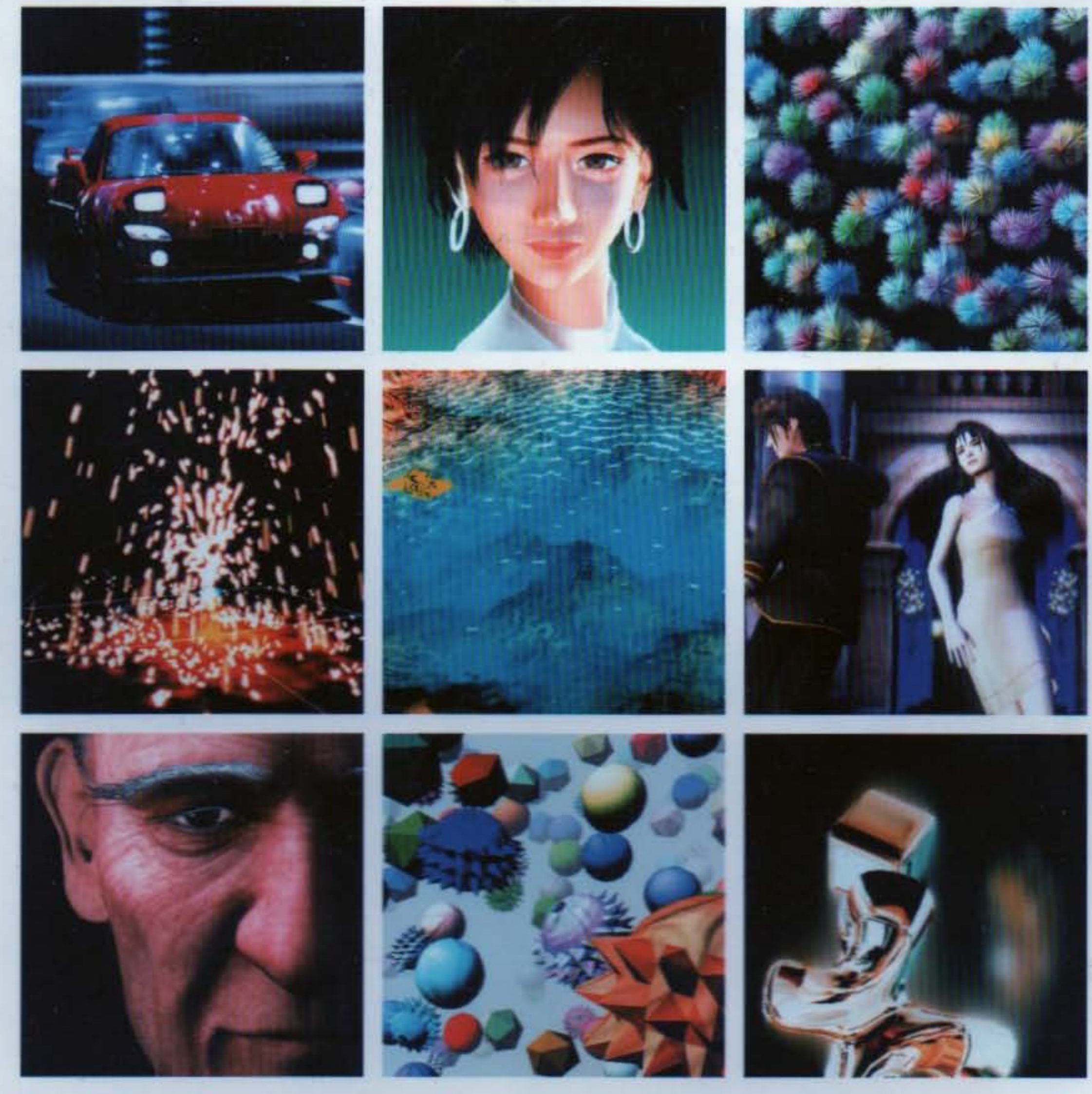
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EDGE

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The next generation PlayStation: Edge reveals all

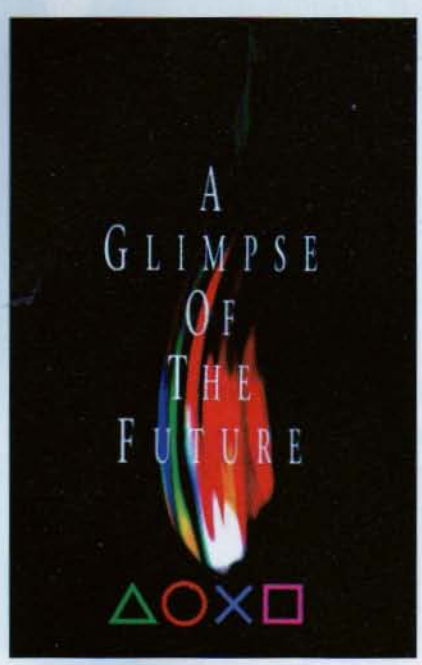


16 million polygons per second and counting: Sony redefines the superconsole

PREVIEWED: ACCLAIM'S DREAMCAST RACER • ION STORM'S LATEST • CRAZY TAXI • GTA LONDON • V-RALLY 2 • RALLY MASTERS

REVIEWED: POWER STONE • SILENT HILL • CASTLEVANIA 64 • SILVER • WILD METAL COUNTRY • LANDER • WARZONE 2100





"No more than five software companies can develop games that take full advantage of the PlayStation 2's capabilities." These are the words of **Tomoyuki Takechi**, head of SquareSoft, who was giving his reaction to the demos Sony recently presented in Japan in order to reveal just what an insanely powerful beast its next generation PlayStation will be.

The machine does not even have an official name yet, nor has Sony revealed what it will look like, but one thing is already clear: a revolution is on the horizon, and the power behind it may in fact be too extreme for many small-scale developers to properly exploit.

Can a games machine actually be *too* powerful? Of course not. But there is a very real danger that those developers currently struggling to produce even a bog-standard PlayStation or PC game will find themselves hamstrung when faced with true next generation hardware. While Dreamcast has many parallels with the PC as a development platform, the next generation PlayStation is like no other format in terms of both technology and performance – factors which will necessitate new, and brave, working practices.

Gamers had to wait three-and-a-half years for *Zelda: Ocarina of Time*, a title whose production called upon the talents of around 120 individuals. And this was a game for a 64bit, cartridge-based machine, not a 128bit, DVD-ROM true superconsole. What price developing for Sony's new technology, then?

Software company representatives certainly enjoyed Sony's recent 'glimpse of the future'. **Edge** only hopes they can summon the resources and talent in order to exploit the potential of the most significant development the videogames industry has ever witnessed.

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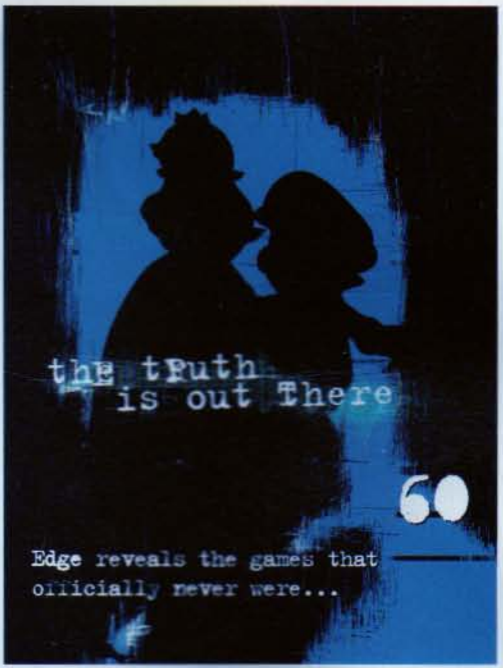
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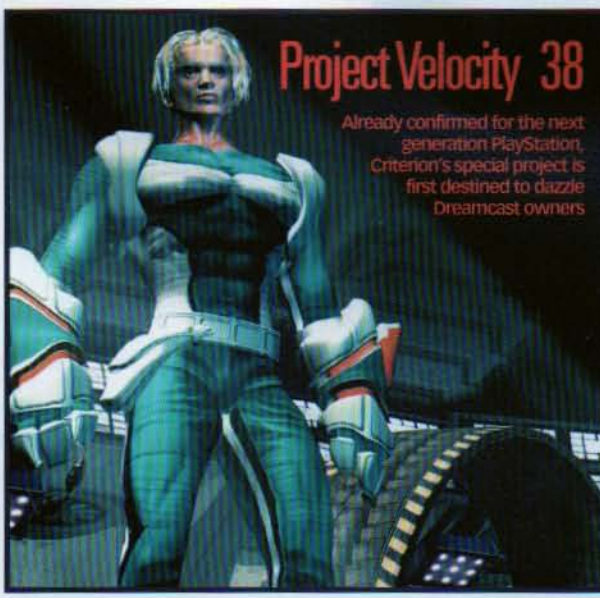
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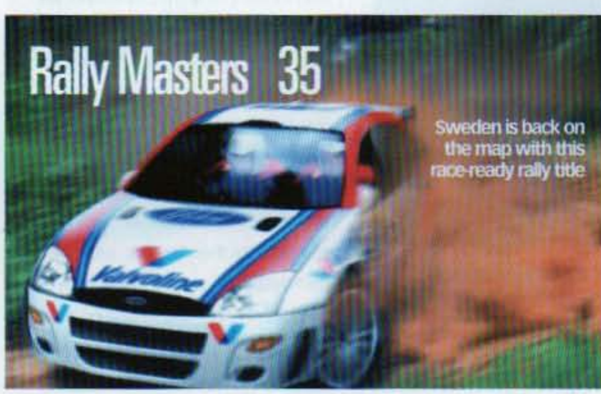


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In-depth previews of *Starlancer, Conquest: Frontier Wars, Daikatana* and *Anachronox*. Plus *Undercover, V-Rally 2* and *GTA London*







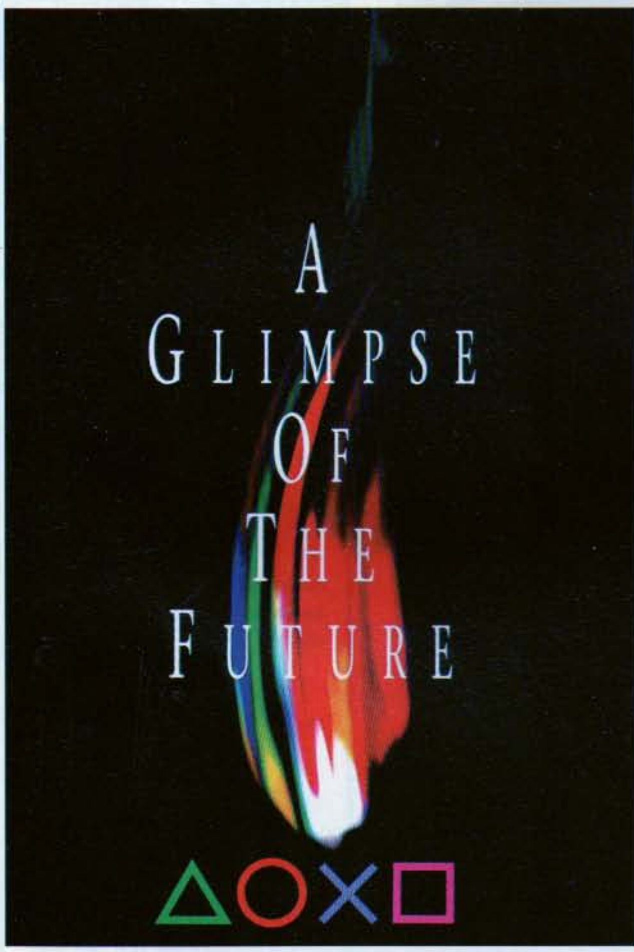


Cutting Edge

The latest news from the world of interactive entertainment

NEXT GEN PLAYSTATION WOWS INDUSTRY IN TOKYO

Amid the 50-millionth PlayStation celebrations, Sony's new gaming technology stuns an anticipant audience







Nobuyuki Idei (left), Sony Corp president, made a rare appearance, while Ken Kutaragi, SCEI's EVP/co-COO, hosted most of the proceedings

As exclusively revealed by **Edge** last month, Sony's PlayStation sequel will be backwardly compatible (in both software and peripheral terms), use DVD as its primary storage medium, and will launch in Japan this coming winter, with a release in western territories pencilled in for autumn 2000.

At approximately 2:00pm on Tuesday March 2, Sony's PlayStation Meeting 1999 (subtitled 'A Glimpse of the Future'), held at Tokyo's International Forum centre, revealed the company's dazzling new technology to nearly 1,500 delegates.

SCEI president and CEO Teruhisa Tokunaka opened with a brief overview of PlayStation sales performance over the last four years, although there was little doubt about the real reason for bringing journos and industry representatives to Japan from across the globe. After an assurance that strong support for the PlayStation would continue throughout the year, and an MTV-styled four-minute video celebrating the manufacture of the 50 millionth PlayStation, **Ken Kutaragi**, SCE's executive vice president and co-COO, took to the stage to talk about its 128bit successor, referred to during the two-and-a-half hour presentation as 'the next PlayStation' or 'the next generation PlayStation'. "We want to experience something that will have as much impact as it did back then," he said, referring to the PlayStation's Japanese launch on December 3 1994. "We want to be involved in a new form of entertainment," he



Industry types shuffled around impatiently before the event

boasted, before going on to talk about "the future of computer entertainment."

Audience interaction

References were made regarding the integration of the fields of music and films as part of this future. In particular, Kutaragi-san focused on the latter and talked about the interaction between an audience and the characters onscreen as one of the possibilities offered by the next generation PlayStation's 'Emotion Engine' technology, which forms the heart of the new architecture. Behaviour, physical simulation, character intelligence, dynamics, complex real-world system simulation, algorithmic generation of content, images, geometry, animation, skeletal physical modelling and inverse kinematics were just some of the areas discussed by Kutaragi-san, who talked excitedly about the integration of delicate movements such as characters' clothes and hair, before detailing the machine's unparalleled specs (see opposite).

> "We want to experience something that will have as much impact as it did back then... We want to be involved in a new form of entertainment" Ken Kutaragi, SCE



Sony claims that the developers responsible for early demos had only three weeks at their disposal. Polyphony Digital Inc. showed off an enhanced *GT*

Perhaps most significant, at 6.2MFLOPS, the Toshiba co-developed 128bit CPU (or 'Emotion Engine') excels at floating-point operations, allowing the implementation of unprecedented detail and eclipsing the equivalent performance offered by a Pentium III, while matching that of fully fledged supercomputers.

Despite the new format's DVD-ROM capabilities, the conference revealed that the first few titles will instead appear on CD-ROM, with later games making the transition to DVD discs to make use of the format's ability to carry high-end 3D sound reproduction, such as Dolby Digital and DTS (Digital Theatre System). The console is not expected to play DVD movies out of the box; **Edge** sources have intimated that an add-on module will be made available for this purpose.

Technical aptitude

On paper, the next generation PlayStation looks majestic, but the visual demos at the conference hammered home the machine's real potential. Nine short technical demos were initially shown as an indication of the console's strengths. The first opened with a detailed Crash Bandicoot running towards the camera followed by a group of cutely animated penguins, each puffing semi-translucent breaths. As Crash approached the lens, the penguin population grew impressively and Kutaragi-san joked that the sequence represented the many individuals involved in the designing of the console itself. While the high number of characters onscreen was certainly exciting, it didn't hide the lack of textures on the uninspired grey backdrop.

The second demo focused on the machine's polygon-handling ability, showing a large number of multicoloured spheres, spiky balls and other geometrical shapes moving in and out of the screen with impressive velocity. The third (and one of the most memorable) involved a vast number of variously coloured fluff balls, each with 900 polygonal strands making up the fur effect. These gently moved multidirectionally across the screen until Kutaragi-san introduced a breeze into the equation, which saw the balls disappear from the screen in a realistic manner. No less exciting was the demo that followed, beginning with a few feathers spinning realistically within a vortex and expanding until many

NGPS SPECS

The next generation PlayStation's extraordinary performance is chiefly down to its 'Emotion Engine' CPU, the custom Toshiba/Sony chip at its heart. As far as other elements go, however, the project's engineers have hardly skimped – note, in particular, curved-surface (Bezier) rendering, Alpha blending and bump mapping as standard. With all effects on, Sony claims a rendering capacity of 16m polys/sec, resulting in an image quality never before seen on a home format.

CPU	**EMOTION ENGINE**
CPU Core	128bit RISC (MIPS IV subset)
System Clock Frequency	300MHz
Cache Memory	Instruction: 16K; Data: 8K+16K (ScrP)
Main Memory	32Mb Direct Rambus
Memory Bus Bandwidth	3.2Gb/sec
Floating Point Performance	6.2 GFLOPS
Geometry Performance:	
+ Perspect. Transform.	66m polys/sec
+ Lighting	38m polys/sec
+ Fog	36m polys/sec
Bezier Surface Generation	16m polys/sec
Image Processing Unit	MPEG2 Macroblock Layer Decoder
Image Processing Perform.	150m pixels/sec
GRAPHICS	**GRAPHICS SYNTHESISER**
Clock Frequency	150MHz
Embedded DRAM	4Mb
Total Memory Bandwidth	48Gb/sec
DRAM Bus Width	2,560bits
Pixel Configuration	RGB:Alpha:Z Buffer (24:8:32)
Maximum Polygon Rate	75m polys/sec
Z Buffering	32bit
Rendering Functions	Texture Mapping; Bump Mapping; Fogging; Alpha Blending; Bi-/Trilinear Filtering; MIPMAP; Antialiasing; Multipass Rendering
Pixel Fill Rate	1.2 Gigapixel/sec
Sprite Drawing Rate	18.75m (@ 8x8 pixel)
Display Compatibility	NTSC/PAL/Digital TV/VESA (max 1,280x1,024)
SOUND	**SPU2+CPU**
Number of Voices	ADPCM: 48ch on SPU2 plus programmable voices
Sampling Frequency	44.1KHz/48KHz (selectable)
IOP	**I/O PROCESSOR**
CPU Core	Current PlayStation CPU
Clock Frequency	33.8MHz/37.5MHz (selectable)
Sub Bus	32bit
Interface Types	IEEE1394, Universal Serial Bus (USB)
Communication	Via PCMCIA
DISC DEVICE	**CD/DVD-ROM**







Namco's realtime *Tekken* demo (main) was easily the best representation of the potential soon to reach the world's developers. Square's beat 'em up-themed demo (other shots) showed the levels of detail achievable









In addition to its beat 'em up demo (top left, centre), which revealed a startling amount of character/background interaction, SquareSoft revealed a sumptuous *Final Fantasy VIII*-inspired dance sequence (left). Namco, meanwhile, opted for a demo featuring Reiko Nagase, its *Ridge Racer* girl (main)

> "I can say with the utmost confidence, that this is indeed a historic day... The next generation PlayStation will become one of the major pillars for Sony's electronics business" **Nobuyuki Idei, Sony Corp**

hundreds filled the screen in a dazzling display of the machine's transparency capabilities. Next up was a dragon fireworks display which saw a pyrotechnical device firing myriad sparks into the air which then bounced around as they hit the ground – their trajectory calculated in realtime, of course. A duck continuously morphing into a face before ending up as a fish was a further intriguing display of the machine's realtime facilities and was followed by a screen showing four moving chromed objects displaying some astounding reflection mapping as well as the ability to play with photographic effects, such as depth of field, by continuously bringing them in and out of focus. One of the more impressive demonstrations featured a water pool with waves and ripples created in real time. As the camera was positioned above the beautifully animated pond, two yellow fish could be seen swimming beneath the agitated surface which realistically altered their appearance with every passing ripple. On a similar theme, but even more breathtaking, the last demo involved a rubber duck and plastic submarine floating about in a water-filled sink. Both objects reacted to the water's movement, yet even more astounding was the way the water exuded authentic characteristics when the sink was drained. And then filled back up again.

As the ecstatic crowd attempted to digest all of this, **Nobuyuki Idei**, president, representative director and co-CEO of the Sony Corporation, made a brief and extremely rare appearance. "I can say with the utmost confidence, that this is indeed a historic day," he remarked. "The next generation PlayStation will become one of the major pillars for Sony's electronics business – that is for certain."

Developer demos

Kutaragi-san then returned to the stage with what he termed "a concept video." Essentially a collection of short technical demos (developed in a claimed three weeks) applied to far more game-like settings, contributors included some of

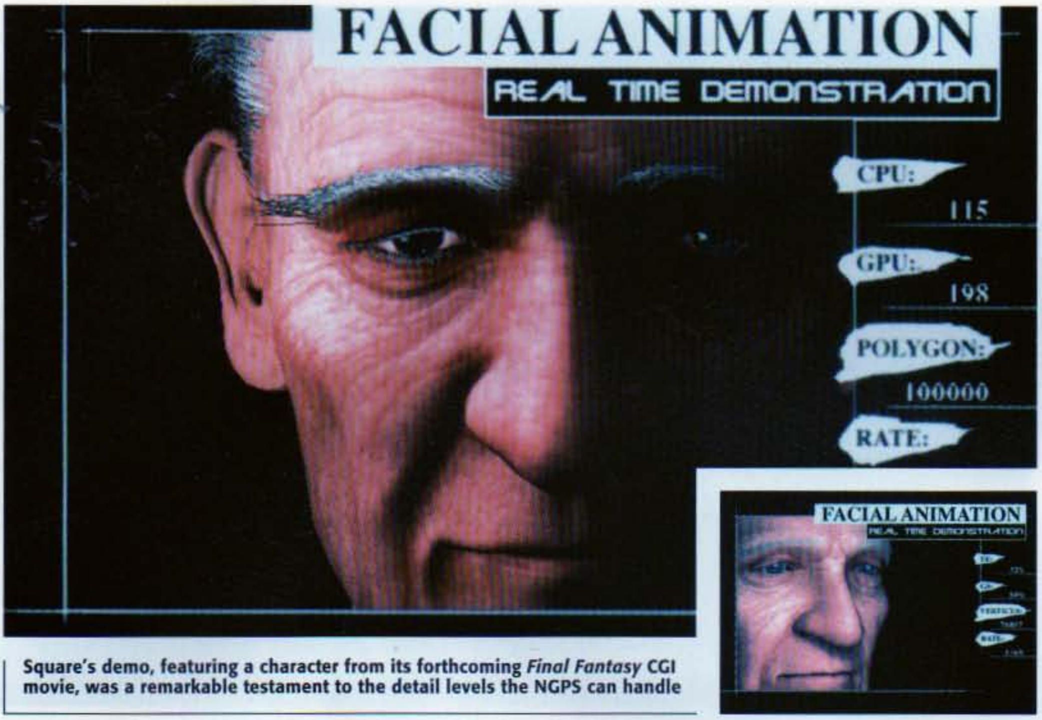
DEVELOPING FOR THE NGPS

Bristol-based SN Systems, which supplies official dev kits for the existing PlayStation, has revealed it is working with Sony again to deliver the next generation solution to developers. **Edge** talked to director **Andy Beveridge** to glean his thoughts on the new format.

Edge: How do you think developing for the new format will change the working methods of developers?
Andy Beveridge: The horsepower displayed by the EE is a quantum leap, a revolution in computing power for the game development community. So I think we should expect to see software initially repeating current experiences, but at exponentially higher quality in terms of visuals and sound. Then, as developers get into the architecture and designers adjust to the freedom the system offers, we should start to see titles that thus far have not been attempted: complex character interactions in roleplaying games, totally believable environments that look and sound like the real world, and exciting developments in physics modelling to make fantastic game worlds.

Prototyping and 'wizard' tools could become essential to manage the worlds they create. Our new toolset will facilitate this since it supports debugging in multiple user-definable languages.
Edge: How difficult do you think it will be for developers to embrace the new technology, and how long before they start realising its full potential?
AB: The learning curve to full control of the system will not happen overnight, but the benefits of the hardware will be apparent from day one – the visual and auditory flair of the system will be employed immediately to a certain extent. If you're asking when will developers become totally proficient, well, good quality tools will make the system accessible – and the usual Sony backup will guide developers into exploiting the power reasonably quickly, but don't expect to see products that stretch this much power for a couple of years.
Edge: How do you see developers using the capacity of DVD?
AB: If the final console can operate like a set-top box, applications as well as games could easily follow, and DVD becomes one media option alongside alternatives such as Internet access.

Everyone will do amazingly high-quality FMV, and the high-end rendering solutions and tools will be in widespread use. But games will be able to use the high data capacity to create huge worlds to explore, to spool an infinite variety of photoreal textures to overcome the limitations of current rendering technology – make believable environments and detailed characters to live in them. It really takes much pressure off the RAM capacity of the system – some think the PC DVD systems have yet to be exploited due to lack of market penetration. DVD can provide a huge data stream for interactive rather than prerendered material.
Edge: As far as the machine's architecture goes, what do you believe are the most valuable components to developers?
AB: Vast data-handling capacity and beyond-belief rendering power, no more fogging, no more pop-up – using depth cueing and the B-spline functions to create images that look real. The realtime sound processing will give games a fantastic atmosphere, too.
Edge: Can you see anything in there that could potentially present a problem to developers, or is it really a dream format?
AB: Well, the overwhelming ability to do almost anything you want, and having restrictions lifted, can be really daunting. And specifically developing on multiple processors at once could be difficult, which is why SN's new debugger is built with this idea from the ground up.



Square's demo, featuring a character from its forthcoming *Final Fantasy* CGI movie, was a remarkable testament to the detail levels the NGPS can handle

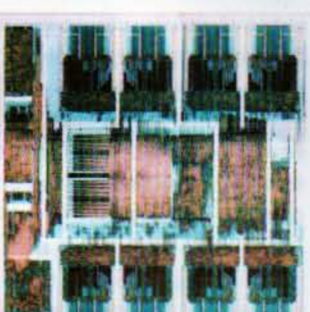
the best exploiters of current PlayStation technology and served as an astounding indication of the machine's true potential. Kazunori Yamauchi, Polyphony Digital Inc.'s president and producer of *GT2*, led the field with a brief sequence featuring three cars negotiating a corner from one of *Gran Turismo*'s night-staged tracks. The sequence featured at least as much detail as *GT*'s impressively rendered opening FMV sequence, including motion blur. Yamauchi's assistant then proceeded to drive a red Mazda RX-7 through the entire course in order to convince any doubters of the demo's realtime claims. It proved a rather persuasive exercise.

SquareSoft's three demos centred around the concept of emotions and behaviour Kutaragi-san had mentioned in his opening speech. The first, and possibly the most impressive, featured the face of an old man (a character in the forthcoming *Final Fantasy* CGI movie) sporting unprecedented detail. Every expression (from smiling to frowning) was conveyed with life-like quality: each of his grey hairs was individually drawn and a close-up of his aged faced revealed the smallest wrinkle amid individual skin pores.

Rather less eerie, the second Square offering was a fight sequence involving eight characters and rendered on the fly. The first half of the demo took place inside a restaurant and many realistic touches could be seen (furniture collapsed, wall-mounted pictures displaced), while the second took place in the restaurant's gardens, complete with obligatory waterfall displaying jaw-dropping particle effects.

The final demo was a rather cinematic affair featuring two of *FFVIII*'s motion-captured central characters dancing in a lavish setting. The characters' expressions changed, their clothes stretched according to their movements, and their hair moved realistically. In many respects, this was reminiscent of the CGI-enhanced dancing sequence in Disney's 'Beauty and the Beast'. Only better.

However, the clearest indication of the potential enhancements brought about by Sony's next generation hardware (and probably the afternoon's most impressive demo) came from



Running at 150MHz, the Graphics Synth is a key element to the NGPS



An early Sony ally with the original PlayStation, From Software presented a demo which showcased the successor's realtime lighting and fogging

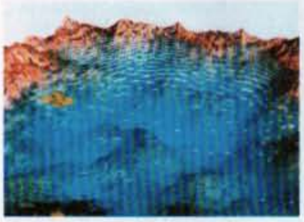
THE NGPS VS...

The 'Emotion Engine' CPU may run at an unremarkable 300MHz, but what's interesting about the chip is Sony's claimed performance levels. The processing advantage is down to Sony's move to a 128bit core technology. The Pentium III operates on a 32bit core, though the PIII does dual process to mimic 64bit capabilities. With a memory bus bandwidth of 3.2Gb per sec, the NGPS can pump data in and out of memory three times faster than the latest PIII system running on Intel's upcoming AGP 4X motherboard. With floating-point capabilities quoted at 6.2b floating-point operations per second (GFLOPS), the chip again trounces a 500MHz PIII by a factor of three. Floating-point maths are crucial in the calculation of 3D scenes, so the next gen PlayStation should be the best on the market. Dreamcast runs at 200MHz and handles only 1.4GFLOPS.

At 150MHz, the NGPS's graphics processor compares averagely with upcoming PC graphics chips like the TNT 2, Savage4 and Voodoo3, which all run at between 125 and 183MHz. Again Sony is claiming enormous levels of performance from its technology. The Graphics Synthesiser can draw up to 75m triangles/sec, compared to 8m on the fastest Voodoo3 chip. Dreamcast pumps just 3m. Sony's figure should be taken with a pinch of salt, though, as it's a theoretical maximum. The sustained rate is a still-respectable 20m. In terms of fill rates, the NGPS can handle 1.2b Z-buffered, alpha-blended, textured pixels per second. Voodoo3's performance is to hit 366m. However, it's not clear if Sony's talking about a pixel rate with features like dual texturing, bump mapping and trilinear filtering turned on, or the chip's maximum rate with plain texels. The awesome power of the graphics processor is down to the chip's built-in memory. PC graphics cards rely on memory chips which automatically lowers graphics memory bandwidth. The Graphics Synthesizer boasts an astounding 48Gb internal bus. The result is that the next gen PlayStation will be able to render images far too good to be shown on a normal television. But then Sony could have HDTVs in mind as the recommended display units for its new golden child.









SCEE's demo displaying the next gen PS's ability to handle particle effects with realtime trajectory calculations centred around a Chinese dragon firework (top left). The water in the demos behaved as rippling water should (centre and left), while From Software's skeletal monster character impressed, too (main)

"I think the real competition is for the time and the attention [span] of people – anything that affects that should be considered competition" Teruhisa Tokunaka, SCEI

Namco. In addition to an animated sequence of the *RR4* girl (replete with flowing hair), the company put together a realtime 'PlayStation 2 demo' of *Tekken*. Imagine Paul and Jin, displaying as much detail as they did in *Tekken 3*'s FMV sequences, fighting in a rendered street setting illuminated by a mixture of moonlight and street lamps, with smoke billowing from the street's drain system. Now add 30 equally detailed onlookers circling the sparring pair, frantically gesticulating as they encourage the fighters. All at a constant 60fps and with the promise from the *Tekken* team's lead programmer Masanori Yamada that with more time, life-like clothing, hair, expressions, environmental mapping and 100 onlookers would have been included.

Entertainment integration

As the audience recovered, Kutaragi-san made his final appearance, giving release dates and confirmation of the machine's backwards compatibility, but no indication of Sony's pricing strategy.

He went on to underline the console's support of the new standards for digital interconnectivity (IEEE 1394 and UBS), which would allow it to connect to a VCR, set-top box, digital camera, printer, joystick, keyboard and mouse, among other devices. According to Kutaragi-san, the true integration of entertainment and computers has yet to happen, and this is one of the aims Sony is focusing on for the next PlayStation. References were made regarding Intel, communication (ie modem) and CAD rendering tools.

It's clear that, having captured the massmarket with its first stab at a game console, Sony wishes to consolidate its position, which, on the strength of the demos **Edge** witnessed, is an inevitability. But what of Nintendo and Sega? Asked who he believed Sony's competition now was, Teruhisa Tokunaka could only respond: "I do not know. Maybe the mobile telephone? I think the real competition is for the time and the attention [span] of people – anything that affects that should be considered competition. For example, my son used to be a PlayStation fan and he'd spend many hours playing, but recently, because he found a girlfriend, he's spending much, much more time, energy and money in that aspect and his playing time has reduced substantially. And I certainly consider that as competition."

INDUSTRY REACTION IN TOKYO

Jez San, Argonaut "Amazing. It's amazing. Everything I expected, and it's going to be here sooner than I could have imagined. Memory's okay – I think the memory will be acceptable because you can do the B-splines and the higher order surfaces so that saves memory. Also it's got the hardware MPEG decompression in there so you can save memory on textures, and I think the memory will actually stretch quite far. I think the memory is enough. And the CPU power is obviously very, very, very impressive and the rendering chip is very good. It more than meets my expectations and I'm very, very happy that it's coming so soon."

Fredrik Liliegren, Digital Illusions "I was shown what I believe is the one format for the next five or six years, because it's so far ahead of everything out today and everything that's been announced about it moves the frontline again – like the first PlayStation did for Mega Drive and Super Nintendo by introducing the 3D realm. Suddenly you can do stuff that you haven't been able to do before but it also means that you *have* to do stuff that you haven't done before, so it's a great challenge for us as well, as developers, to use this hardware to give the consumer something new, not just rehashed versions of the old things. You can't really complain any more that the hardware's not powerful enough. Obviously, there's things we still want to do that we can't do on this machine, but they're much, much less. We will have great flexibility on what we can do – it's going to be good. And we can do it the real way instead of cheating like we do now."

Richard Darling, Codemasters "I'm very impressed. I think the kind of increased excitement that we'll be able to build into the games will be a big step up. There'll be so much more detail – everything that appears in the game can behave in a realistic manner, even if it's not part of the actual game. You'll be able to have just peripheral objects and characters appearing and behaving realistically, which you can only really do when you have enough horsepower there... And although I couldn't think of anything extra to do [with the next machine] – and really I don't think Sony have either, in some respects – what they have done is they've made it powerful enough that it'll be in the detail. I think that this machine should be capable of a big enough step up that there'll appear to be, I don't know what it'll be called, but a distinction between old 3D games and these 3D games, which will be quite clear when you play them.

Peter Molyneux, Lionhead Studios "In short, the PlayStation 2's superb design should cause all of us to become much more ambitious or die."

POLYPHONY DIGITAL INC.'S GT DEMO

Many members of Polyphony Digital spent the two weeks preceding the announcement living in the office in order to get this demo ready in time (according to Teruhisa Tokunaka, SCEI president, the cars were still missing wheels when he saw it the day before it was due to be shown), with stunning results. A video sequence ran briefly (shots shown right), with the calculations made on the fly. A member of the *GT* team then completed a lap of one of the game's night courses in real time, using a Mazda RX-7 and looking as detailed as anything seen in *Gran Turismo*'s opening CGI sequence.



NAMCO'S REIKO NAGASE DEMO

The first of Namco's three demos featured *Ridge Racer*'s Reiko Nagase in delectable form. Again, the quality appeared to match that of the CGI sequence seen in *Ridge Racer Type 4*. Every aspect seemed right, from her stretching dress to moving hair strands and swinging silver earrings.





SQUARESOFT'S FFVIII DEMO

While only the camera was manipulated in real time (although the sequence was calculated on the fly), Square's motion-captured dance demo displayed all of the visual detail the auditorium audience expected. At times, the illusion of a real dancing couple was spookily convincing.





FROM SOFTWARE'S DEMO

The most impressive aspect of this macabre sequence was a massive skeletal monster boasting some rather authentic movement (not that **Edge** has met many such creatures...). Earlier, several skeletons had collapsed in a heap of bones, showcasing a highly complex dynamics model.



SCEE'S TECHNOLOGY DEMOS

Harder to envisage in-game, SCEE's demos focused on individual aspects. Feathers displayed semi-translucent characteristics while moving realistically through the air, fluff looked fluffy, objects beyond the camera's depth of field were suitably unfocused, and polygons flew around by the sackload.



INDEPENDENT SPIRIT DRIVES MILIA '99

New European talent struts its stuff amid calls for chart-topping titles

The sun shone benevolently on Cannes as Europe's game and multimedia communities invaded the French resort for Milia '99. Taking place between February 9-12, the exhibition was this year trumpeted louder than ever. It was, then, something of a surprise to arrive and find Milia Games relegated to a marquee while Cannes' Palais de Festivals new wing is completed.

To the casual floorwalker Milia Games had little to offer in terms of new titles, while Milia itself was awash with the usual 'who buys that?' multimedia. However, **Edge** caught up with Infogrames' enigmatic boss **Bruno Bonnell**, and found him buzzing about Milia's importance to the industry.

"It's really a critical European way to identify talent, to have discussions in a completely different environment to a trade show," Bonnell insisted. "The Rolling Stones and The Beatles of games are being identified here."

Along with Intel, Infogrames was one of Milia's major sponsors, although it brought few games. However, a deal to produce content for cable provider NTL (see opposite) was a confident sign that Bonnell's intention to lead the way into all new entertainment mediums was serious.







The comedy double act of Bruno Bonnell and Martin Kenwright (left and right in main photo) went down a storm with the Milia D'Or award crowd. Sony's stand was subdued (top right), while the New Talent Pavilion impressed

Brand leaders

Of the three lead console producers, Sega and Sony had stands, with the former holding a packed press conference for Dreamcast where it revealed its true colour – blue, in this case. A video presentation of games was an entertaining diversion (with European 1.5-party titles notably absent), of which *Shenmue* was the star. **Edge** was privy to a showing of the full-length digital video and came away very impressed. Having so far cost $20 million, Sega must be hoping that Suzuki-san's opus is something special indeed.

Elsewhere, ATi and AMD were keen to promote the new Rage 128 graphics card and K6 III processors respectively. Both have industry standards in their sights (3Dfx and Intel), and both made strong cases for their products, not least their affordability.

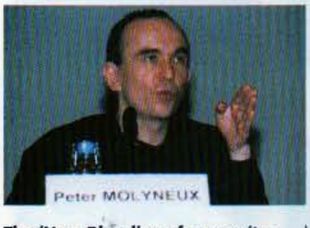
Industry intelligentsia

Away from the show floor, a number of seminars were held, covering topics ranging from 'Come and Play Master Backgammon' to the rather more interesting 'Creativity with Commercial Clout', hosted by industry noble Peter Molyneux. Accompanying him were DID's Martin Kenwright (still flushed by *Wargasm*'s Milia D'Or award for best action game), Argonaut's **Jez San**, and Gary Bracey, the ex-Ocean head of development now at Telstar. San's claim that "it's not worth developing a game these days unless it's going to be a hit" was generally echoed by all present.

Edge also attended 'The New Blood of Videogaming', featuring Demis Hassabis (Elixir), Alex Garden (Relic), Dr Gavin Rummery (Core) and Ignacio Perez Dolset (Pyro). Sadly, a relentless stream of questions from their host prevented the speakers really getting down to business – that was happening elsewhere as Bonnell and others signed up the new blood's games for the year 2000 and beyond.

"IT'S REALLY A **CRITICAL EUROPEAN WAY** TO IDENTIFY TALENT. **THE ROLLING STONES AND THE BEATLES OF GAMES ARE** BEING IDENTIFIED HERE" **Bruno Bonnell, Infogrames**





The 'New Blood' conference (top, Alex Garden speaking) was a let down. Peter Molyneux's kung fu lessons were far more rewarding

MILIA WINNERS

The Milia D'Or is one of the industry's most respected awards, judged by a panel of international members and announced on the opening night of Milia. Some of this year's winners were as follows:

Action game
Wargasm (DID)

Adventure game
Legend of Zelda: Ocarina of Time (NCL)

Strategy game
Populous III: The Beginning (Bullfrog)

Simulation/sports game
Gran Turismo (Polyphony Digital Inc.)

Family entertainment
ShiftControl (AudioRom)

Interactive information services
CNN Interactive (CNN)

Most impressive gameplay
Legend of Zelda: Ocarina of Time (NCL)

Hottest multiplayer game
Starcraft (Blizzard)

People's choice award
Gran Turismo (Polyphony Digital Inc.)

SEGA'S FERRARI FLOORS AOU

Super Naomi provides Model 3-beating performance at Japan's coin expo

Sega's coin-op division, and more specifically its Naomi technology, was the undoubted star of this year's AOU (Arcade Operator's Union) show, held at Tokyo's Makurahi Messe on February 17-18.

Sega would not allow any press to take photographs of it in action, but the key game of the event was *Ferrari F355*, the AM2-developed title which designer Yu Suzuki is rumoured to have been working on for the last four years. Using four Naomi boards in tandem, *F355* offered visuals of a considerably higher quality than Model 3, with astonishing levels of detail evident on pit-crew members, dynamic camera angles throughout the opening sequence, and convincing in-game animation. The finished game, which is set to use a three-monitor display, could well re-invent racing coin-ops.

Having persuaded many of its traditional competitors to adopt Naomi as a standard arcade board, Sega is now working with Capcom, Namco, Tecmo, Jaleco and SNK on the format, which should bear considerable fruit in the coming months. **Edge**'s full report from this year's AOU show appears in Arcadeview, p118.



They came, they saw, they almost passed out at the sight of Yu Suzuki's latest racing title

CABLE COMPANY CONNECTS WITH GAMERS

Set-top setup offers massive multiplay to UK households

This September should see a minor revolution in UK home entertainment. With access to over 2.5 million households, cable provider NTL is planning to offer a set-top box gaming service with the potential for massively multiplayer games.

Capable of connection speeds of around three megabits per second (375K per second), NTL's network will be available through its own set-top boxes, and eventually into home PCs. Current box technology is equivalent to a P100 with 8Mb RAM, with improved units due in 2000. The potential for multiplayer gaming, as NTL's director of content **John Hondros** explains, is huge: "There's a company looking at developing a multiplayer *Capture the Flag*, having 50 to 100 people playing simultaneously."

With the approximate subscription fees of £20 per month likely to include cable telephone, basic TV channels, online services, Internet access – and the set-top box – NTL's system could be next year's sleeper hit with gamers.

Videogame companies interested in creating content for the NTL network should call NTL's John Hondros on 0171 909 2100 for more information.



Substituting the passive TV experience for an interactive one, NTL will be beaming in to 2.5 million homes in the UK

EMULATION REVELATION

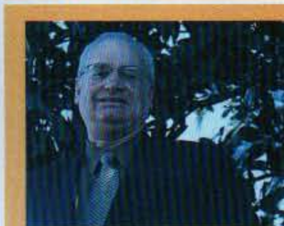
Dreamcast's *WinCE* plays up to *Spuri OS* for PlayStation

Following **E**69's revelations regarding the *UltraHLE* N64 emulator for the PC, it seems almost unremarkable that another controversial piece of emulation software has been announced.

Created by unknown Japanese codeshop SpuriSoft, the new program is certain to prompt a swift response from Sony's lawyers. Using Dreamcast's *WinCE* operating system, Spuri has managed to build a stable and reliable PlayStation emulator, dubbed *Spuri OS*. Claimed to be 100 per cent compatible with the PlayStation catalogue of titles, Dreamcast users simply boot the *Spuri OS* GD-ROM, wait for the boot screen, and then insert a PlayStation CD. At time of press neither Sega nor Sony were willing to comment.



CUTTINGS



Jim Charne

Who's Oscar?
While at Milia, **Edge** met up with **Jim Charne**, president of the Academy of Interactive Arts and Sciences, the body responsible for the videogame industry's own Oscars. "The fundamental difference in what we do is that our award is a peer-based award – having the people who create the games vote to decide who should be the best is a unique peer-based statement," explained Charne, one of the original Activision team turned industry lawyer. This year's finalists will be announced April 15, with voting set to close on May 7 and the winners announced at E3 '99 in LA.

X-rated Music
The new 6.1 release of Microsoft's DirectX API was announced at Milia, and includes a fully reworked iteration of *Direct Music*. Designed to bring the latest techniques in game audio to the mainstream, including interactive and context-sensitive music, *Direct Music* has been generally well received by the development community.

Sega contemplates DC growth
Although Sega hadn't made an official announcement at time of press, it's believed that a Dreamcast hard disk may be in the offing. Connecting to the console via its serial port, the drive will be a 1Gb unit for storing game data and an Internet cache. Also rumoured is that the standard Dreamcast controller is being redesigned prior to the console's western release. Expect more information soon.

Dreamcast 2 hoax
Following Sony's NGPS announcement, the Net was awash with rumour and speculation. Finest was FGN online's (**www.fgnonline.com**) 'exclusive revelation' that NEC was already working on a Dreamcast successor, capable of an NGPS-crushing 60m polys per second. Laugh? **Edge** nearly cried.

PRESCREEN

EDGE PREMIERES INTERACTIVE ENTERTAINMENT'S FRESHEST FACES

The irresistible lure of the arcade

Sega's coin-op strategy promises a new gaming era

Every gamer should love coin-ops. They are the consumer market's inspiration, its parent, its binary DNA. The very first graphical flickerings of *Space War* were destined to trigger an explosion of interactivity far beyond the dreams of its creator. For the true videogamer, there is no substitute: from *Pitstop* to *Daytona USA*, and from *Space Invaders* to *Space Harrier*, the foundations are laid upon countless PCBs.

But recently the coin-op scene has been in trouble. In the face of perceived competition from home consoles, the arcade industry sought to deliver larger, and consequently more expensive thrills. *G-Loc*, *Downhill Racers*, *Alpine Racer* and so many others are now a costly reminder of how important enthralling gameplay really is.

After five years of specialist cabinets packed with custom hardware seeking to deliver fairground ride experiences, the circle has been completed. Namco's System 11 and SNK's Neo Geo were reminders that high cost doesn't automatically equate to high fun, and that simple coin-ops weren't such a bad idea after all. Sega's Naomi has since hammered home the point.

A Sega coin-op using the super-capable Model 3 board can cost several thousand pounds. A Naomi-powered example may not achieve the same sort of performance, but once a host cabinet is purchased an arcade operator is able to install new games at around £500 a throw. The implications to money men are obvious: less risk, higher yield per square metre, lower maintenance. Sega is on to a winner from the outset.

For gamers the benefits are even greater, not least because of the compatibility between Naomi and Dreamcast. Judging by Capcom's latest creation, *Power Stone* (see p70), conversions are a relatively simple process – 'arcade perfect', even. Thirdparty developers are faced with an appealing prospect: they can create coin-op titles that are guaranteed strong distribution – and, using the same development team, publish a Dreamcast version in short order, riding the wave of the arcade version's popularity.

The first handful of titles already bode well for what is to come. Sega's *Crazy Taxi*, profiled on p32, is a fabulously inventive and enjoyable spin on the traditional driving game. Complemented by *House of the Dead 2* and *Zombie Revenge*, *Crazy Taxi* could be leading the way into a new golden age for the coin-op industry. Moreover, Naomi could yet prove the ace up Dreamcast's sleeve.







Sega's first wave of Naomi titles have all impressed (and they needed to, frankly). *The House of the Dead 2*, *Zombie Revenge* and *Crazy Taxi* (see p32) are all bound to appear on Dreamcast

Edge's most wanted Scanning the horizon for the hottest softs









Shenmue	Gran Turismo 3	Homeworld	Project Velocity
(Dreamcast) Sega	(NGPS) Polyphony	(PC) Relic Software	(DC/NGPS) Criterion
Set in 1980's Hong Kong, Yu Suzuki's reputation – along with $20 million of Sega's cash – rides on the success of this new epic. Dreamcast's killer app?	Sony has already hinted that Polyphony's classic racer will appear on the next generation PlayStation, and early tech demos bode well.	Just the mention of cult TV show 'Battlestar Galactica' is certain to garner Relic's forthcoming space strategy lots of attention, although **Edge** preferred 'Blake's 7'.	Fantastically detailed characters and animation are just a couple of the title's ultramagnetic attractions. Will Sega's own DC titles match this?

Index





PRESCREEN ALPHAS

FOLLOWING E68'S WORLD-EXCLUSIVE LOOK, POLYPHONY'S KILLER SEQUEL RETURNS

GRAN TURISMO 2

FORMAT: **PLAYSTATION** DEVELOPER: **POLYPHONY DIGITAL INC.**























While this brand new selection of *GT2* screens is a better representation of the astounding vehicle selection that will make the final version than the images that graced **Edge**'s pages two months ago, it's still only a very limited selection. Crushingly, Ferrari and Porsche will not make the black disc, but any car fan should find it hard to remain calm at the prospect of taking, among others, the Lancia Delta Integrale, Peugeot 106 (in both Rallye and GTI guise), new Beetle, Mazda R390, and Carlos Sainz's Corolla WRC featured here through their paces. Expect an updated Prescreen next month.

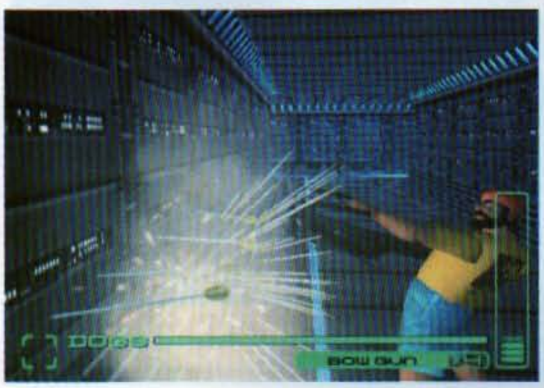
BLUE STINGER

FORMAT: **DREAMCAST** DEVELOPER: **CLIMAX**













Despite its schedule slipping a couple of months past the planned December '98 date, *Blue Stinger* seems certain to boost Dreamcast's kudos following its Japanese release in April. Since last seen (**E**65), two of the three playable characters have come to light: hero Eliot Ballade and weapons expert Dogs Bower. Enemies continue to impress, too, although what the scene depicting a character relieving himself has to do with the plot currently remains unclear...

SNOWBOARDING SUPREME

FORMAT: **DREAMCAST/PC** DEVELOPER: **HOUSEMARQUE**









The Saturn's best on-piste moment was undoubtedly *Steep Slope Sliders*. But whether Housemarque's (unrelated) take on the sport for Dreamcast has the dynamics to match its mighty fine visuals is another matter. Published through Infogrames, a shelf date has yet to be revealed, but expect late '99.

DRAKEN

Despite the meltdown of Psygnosis' US branch, Surreal's *Drakan* remains on schedule for a June release. Boasting enormous 3D environments, the fantasy action-adventure takes place both on the ground, playing as beautiful heroine Rynn, and in the air, riding Arokh the dragon. There are ten multi-mission levels to fight through and as one of the first games to support the *DirectMusic* API, the sound should be well worth checking out as well.



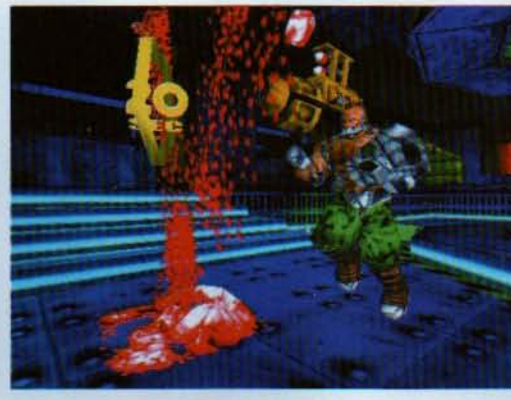


WAR: FINAL ASSAULT

FORMAT: **COIN-OP/NINTENDO 64** DEVELOPER: **ATARI GAMES**

First seen by **Edge** at January's ATEI coin-op fest in London (see **E**69), *War: Final Assault* is a brashly enjoyable celebration of quickfire arcade gaming. Midway's forthcoming conversion to the N64 seems something of a curious decision, then, given that comparisons to *GoldenEye* will be inevitable – and unfavourabe. *War* is loud and shallow, and a fine coin-op.











EXPENDABLE

FORMAT: **PC** DEVELOPER: **RAGE**









Developed by Rage's Newcastle studio, *Expendable* (first revealed in **E**57) is claimed to be an *Ikari Warriors* for the late '90s. Given the reputation of Capcom's classic, Rage has certainly set its sights high. Packed with the company's trademark explosive effects, *Expendable* is definitely a looker, although the gameplay could prove a little thin for 1999's PC owners.

HIDDEN & DANGEROUS

FORMAT: PC DEVELOPER: ILLUSION SOFTWORKS











Following the success of Pyro's *Commandos*, small Czech developer Illusion has entered the action/RTS arena with a WWII-inspired game. Starting in 1943, your task is to lead a group of Allied soldiers carrying out missions behind German lines. Gameplay can be switched between the thirdperson perspective of *SpecOps* and firstperson of *Delta Force*.

GET BASS

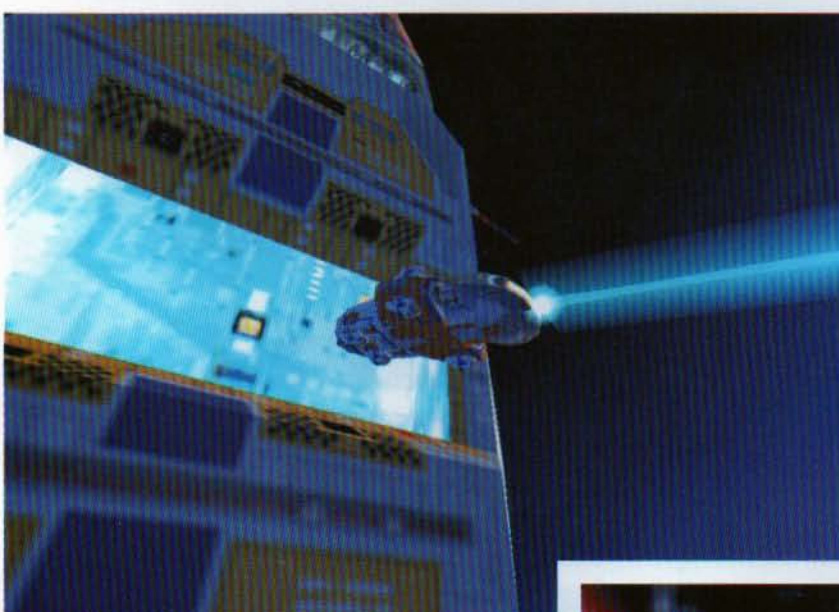
Complete with a rod controller for the home (see p128), Sega's Dreamcast version of fishing title *Get Bass* is looking fairly impressive. Providing pundits with yet another opportunity to compare Dreamcast to the Model 3 coin-op board, it will be interesting to see how the arcade game's control system translates to the home. **Edge** has already ordered a pair of waders, a *Daily Mail* and a nice packed lunch in preparation...





HOMEWORLD

FORMAT: PC DEVELOPER: RELIC









It's looking like 1999 will be a vintage year for space-based RTS games, with both Digital Anvil's *Conquest* (see p26) and Relic's *Homeworld* vying for attention. As these shots attest, Relic's take looks excellent. Early reports also suggest that the novel control interface needed to deal with battle fleets manoeuvring in the 3D environment will be easier to use than many predicted.

WHEEL NUTS

SNES players loved *Super Mario Kart* passionately, and Sony is clearly out for a slice of that affection with this unabashed rip-off of NCL's classic. Cue cute furry characters racing around colourful tracks on nippy go-karts – sound familiar? **Edge** has glimpsed *Wheel Nuts* in action – a good description would be 'bright and busy' – but hasn't yet had chance to play. By taking on NCL's legend, Sony's set itself a tall order.





OMEGA BOOST

FORMAT: **PLAYSTATION** DEVELOPER: **POLYPHONY DIGITAL INC.**











Despite being busy with the *Gran Turismo* sequel (see p16), Polyphony is also responsible for this intriguing, robot-based, true 3D space shoot 'em up. Unsurprisingly, **Edge** can find no evidence of technical faults – some of the sequences are astounding, pushing the PlayStation to its 32bit limits. Many bonus features are included to boost the title's longevity.

APE ESCAPE

FORMAT: **PLAYSTATION** DEVELOPER: **SCEI**









An exclusively Dual Shock-compatible game (both analogue sticks are required), *Ape Escape* is mooted as one of SCEI's last big releases for the PlayStation. Using the left stick, you move main character Kakeru. The right operates a selection of interesting weapons to be used to capture escaped lab monkeys. Unsurprisingly, humorous touches aplenty are promised.

DINO CRISIS

FORMAT: **PLAYSTATION** DEVELOPER: **CAPCOM**

Capcom's renowned *Resident Evil* team seems intent on pushing the cinema-influenced genre further with a tasty-looking dinosaur-infested extravaganza for the PlayStation. Using a full realtime 3D engine (as opposed to the *Evil* series' polys-and-prerendered approach), the game very obviously draws upon 'Jurassic Park' for inspiration. Expect more details next issue.





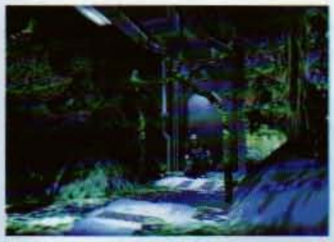


CARRIER

FORMAT: **DREAMCAST** DEVELOPER: **JALECO**

With a couple of months' development time still ahead of it, Jaleco seems to be playing up the sophistication of *Carrier's* storyline over the more obvious attractions of its *Resident Evil*-style zombie gore. Multiple endings driven by in-game choices and complex character interaction will feature prominently. Another device is that once on the doomed carrier Heimdall, players will have only ten hours to discover what has happened onboard before mission time is up.







V-RALLY 2 CHAMPIONSHIP EDITION

As the sequel to the first such title to appear on Sony's machine, only this one can claim to be a second-generation PlayStation rally title. But can it surpass the standards of today's competition?



As you'd expect, *V-Rally 2* features more cars, better graphics, more tracks, better sound, more options, and better locations. It's all rather promising







The 12 locations follow the World Rally Championship circuit closely, so expect European, Asian, African, Australasian and South American stages



As well as the standard arcade, time trial and championship modes, rally duel and battle modes lend an extra edge to the gameplay

Format: **PlayStation**

Publisher: **Infogrames**

Developer: **In-house**

Release: **June**

Origin: **France**

When it appeared in 1997, *V-Rally* represented a departure from the majority of racing games to have previously graced the PlayStation's CD drive. It had scrupulous attention to detail and a bevy of different tracks, as well as being graphically advanced for its day. More importantly, there was a satisfying sensation of weight conveyed when directing its various, well-modelled vehicles (until you crashed and they bounced around as if made of polystyrene, of course). Overall, the dynamics were also rather well accomplished, with cars reacting convincingly to the various road conditions. Essentially, Infogrames had a solid, highly desirable package which – nearly two years on – still outclasses many of today's racing titles.

Not, however, *Colin McRae Rally*. Admittedly, a comparison between the two is a little unfair – Codemasters' only rallying venture (to date) strives for an authentic representation of rally sport whereas *V-Rally* (with its simultaneous four car racing) adopts a financially safer, arcade-inspired approach, albeit with a certain amount of realism thrown into the handling department.

It's perhaps surprising, then, given its rather specialised nature, to see that *Colin McRae Rally* found much favour with the PlayStation-owning masses. Doubtless, its accessibility and addictive playability form part of the answer, yet reality-based rally games have traditionally only appealed to a select audience.

Still, now returning to the PlayStation in improved form, *V-Rally 2* looks intent on stealing back some of *Colin McRae*'s followers, with many additions therefore implemented in this latest instalment. As such, expect six game modes (arcade, time trial, championship, rally, duel and battle), to keep you enthralled after you've selected one of the 20 World Rally Championship-licensed vehicles or a model from





A variety of bonus cars are available, and all of this year's WRC models should make an appearance











Mud-sprayed bodywork and smoking brake pads are just some of the added details to feature

The PlayStation may be showing its age, but Infogrames appears to have squeezed some ravishing results out of its complex compression routines

the wide range of hidden classic rally cars also promised. Last year's Peugeot 306 Maxi may feature heavily in these screenshots, but if the few other models shown are anything to go by, **Edge** expects *V-Rally 2*'s focus to remain firmly on the current season's competitors who should make the major appearance in the game. Hence, expect its successor, the Peugeot 206 WRC (a car that's still in development and has yet to bless this year's world rally championship season with its presence, much to the manufacturer's distress considering two rounds have already been disputed) as well as the Mitsubishi Lancer Evolution (as driven by current world rally champion Tommi Mäkinen), Toyota's Corolla WRC, Subaru's famous blue Impreza, Ford's Escort replacement, the Focus (with Colin McRae now at the wheel), and even newcomers to the WRC circuit Skoda, Hyundai and Seat (after a series of very impressive seasons in the Formula 2 rally classes), the latter with its aesthetically attractive Ibiza offering. Given the 92 tracks on offer, finding one that best suits your car's characteristics shouldn't be too problematic and the 12 international locations certainly enhance the terrain variety.

Given the **92 tracks on offer**, finding one that **best suits your car's characteristics** shouldn't be too problematic

Fans of the original's attention to detail will be happy to find improvements in its successor, too. For instance, the fearless drivers and their po-faced co-drivers are now animated, flames from back-firing exhausts are a common sight, and anyone abusing the car's braking system can expect to end up with a smoking calliper and disc combination at the end of the stage. Naturally, as is the case with most of the better rally-based titles (such as *Colin McRae Rally* and last month's *Sega Rally 2* on Dreamcast), dirt, mud and snow from the various stages clings to the speeding vehicles' decal-clad bodywork, greatly contributing to the realism. Also adding to the real-world feel is the fact that cars' appearances alter following accidents – and the damage suffered is more than just structural, meaning that performance-inhibiting mishaps such as punctures and worn gears actually hamper progress.

Intriguingly, Infogrames claims *V-Rally 2* incorporates two 'secret' pieces of technology, previously unseen in driving games, which will radically affect the genre. **Edge** can only guess as to what these might be, but looks forward to finding out.







While flying cars have long been considered particularly appealing to US players, hopefully the developer will stick with realistic dynamics



The different locations proffer a range of rallying race conditions to test your skills

GRAND THEFT AUTO: MISSION PACK #1, LONDON 1969

Set in the swinging London of the 1960s, and featuring criminal characters inspired by Austin Powers and the Krays, the latest *GTA* offering is unmistakably groovy, baby





Some of the criticisms levelled at *GTA* have been addressed, including those which claimed police bullets to be too small. They're much more visible now







In an effort to recreate the flavour of the '60s, the game uses a number of quaint colloquialisms (left). Road markings, meanwhile, are certainly faithful (above)

Format: **PlayStation/PC**

Publisher: **Take 2 Interactive**

Developer: **DMA Design**

Release: **April**

Origin: **UK**

Developed simultaneously for PlayStation and PC, it's likely that the Sony iteration of DMA's *GTA* follow-up will garner the most attention, if only because it will be the first – and maybe only – data disc released for the format.

At £20 (irrespective of format), *GTA London* takes the original title's gameplay template and refurnishes it with, among other things, a new map, vehicles, missions, storyline and soundtrack.

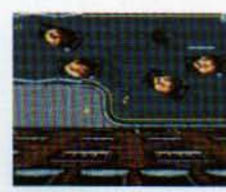
Unlike the original game, however, DMA has eschewed an interpretation of modern-day criminal activities in favour of a gameworld set in the '60s. Rather than Lamborghini and Porsche clones, therefore, Capri and Fiat clones (known in the game as Crapis and Fats respectively) constitute some of the vehicles available to players. But the police are working with the same resources, of course, so don't be surprised to be pursued by panda cars of the day, replete with comedy siren sound effects.

A Canadian-based codeshop has, on DMA's behalf, built its own representation of '60s London which bears many of the hallmarks of the real thing, including Tower Bridge, Big Ben, and even Buckingham Palace. Don't expect the realism levels to slide off the scale (the core *GTA* engine cannot handle roundabouts, for example) and you'll find a fairly faithful recreation of the heart of the swinging '60s.

Populating this scenario are a bunch of characters whose inspiration is obvious: East End 'geezers' proliferate, while some dodgy looking twins appear quite patently inspired by the Krays. Influences come, too, from the likes of Austin Powers, whose Union Jack-liveried car has been mockingly recreated in the game.

In terms of moral content, *GTA London* appears set to take the rather twisted premise of the original and concertedly build upon it. In the demo version **Edge** played, for example, it was possible to hijack an open-top London tour bus and take it for a joyride around town. As more damage was inflicted to the hulking vehicle, the more its upper-deck occupants appeared agitated, before eventually looking rather worse for wear by the experience, to say the least.

DMA promises that the PlayStation version of *GTA London* will fix many of the problems that afflicted the tawdry original (a jerky framerate being the most obvious example), which in itself gives value to the data-disc concept. Whether or not such an initiative will have any impact upon the wider PlayStation gaming scene remains to be seen, however.







***GTA London* should feature more out-of-car action than the original thanks to its more comprehensive mission and level editors**

UNDERCOVER 2025AD

As the Japanese console war hots up, Pulse reveals an action-adventure with mass appeal. Unsurprisingly, the main character is an attractive female cop






Undercover's **action is set in a variety of locations ranging from an industrial dockside (above) to a hotel complex**



No matter how colourful the characters' hair may be (right), Pulse will have to work hard on the gameplay and storyline to convince gamers that shooting members of the Russian mafia is as compelling as wiping out hordes of the undead

With the next generation PlayStation bandwagon gathering speed, Sega is countering Sony's unstoppable hype machine with some high-profile software launches. So it was that Sega's vice president Sadahiko Hirose was on hand to introduce Pulse Interactive's 'X-Files'-meets-*Resident Evil* title to the press.

Undercover is designed to snare the casual gamers that Sega needs to bring on board in order to make the Dreamcast a success in Europe. Inspired by a famous Japanese novel, the thirdperson adventure attempts to balance an involving storyline with striking, high-level graphics and a simple control system.

So far, three characters have been revealed. You take on the role of female cop Kei Samejima, while a mysterious female character, Sammy, is the key to the events which Kei finds herself investigating. Her antithesis is the mafia boss Ron Way, ably supported by a faceless gaggle of Chinese and Russian gangsters.

Set in Tokyo during 2025, there are three different environments to explore. The game begins in the hotel area of the city before action shifts to the Bay Area and Water Town, essentially port and dockside locales. All are rendered with careful attention to such incidental but atmospheric details as signs, shop fronts and graffiti, all representative of Japanese society. And like *Metal Gear Solid*, the camera angles display a dramatic cinematic savvy.

Public awareness of the game has been heightened by a TV advert shot by US animator Mark Giambruno. It previews the start of the game, with Kei and an unnamed male sidekick heading to an emergency in a hotel. As they arrive outside the building, a man is thrown through an upper window by a shadowy female figure – presumably Sammy.

Undercover still has some way to go – the stilted character animation is an obvious candidate for improvement, for example. With these problems ironed out it could – like the other hotly tipped hitters, *Shenmue* and *Blue Stinger* – provide Sega's console with some much-needed momentum.

Format: **Dreamcast**

Publisher: **Sega**

Developer: **Pulse Interactive**

Release: **Summer (Japan)**

Origin: **Japan**

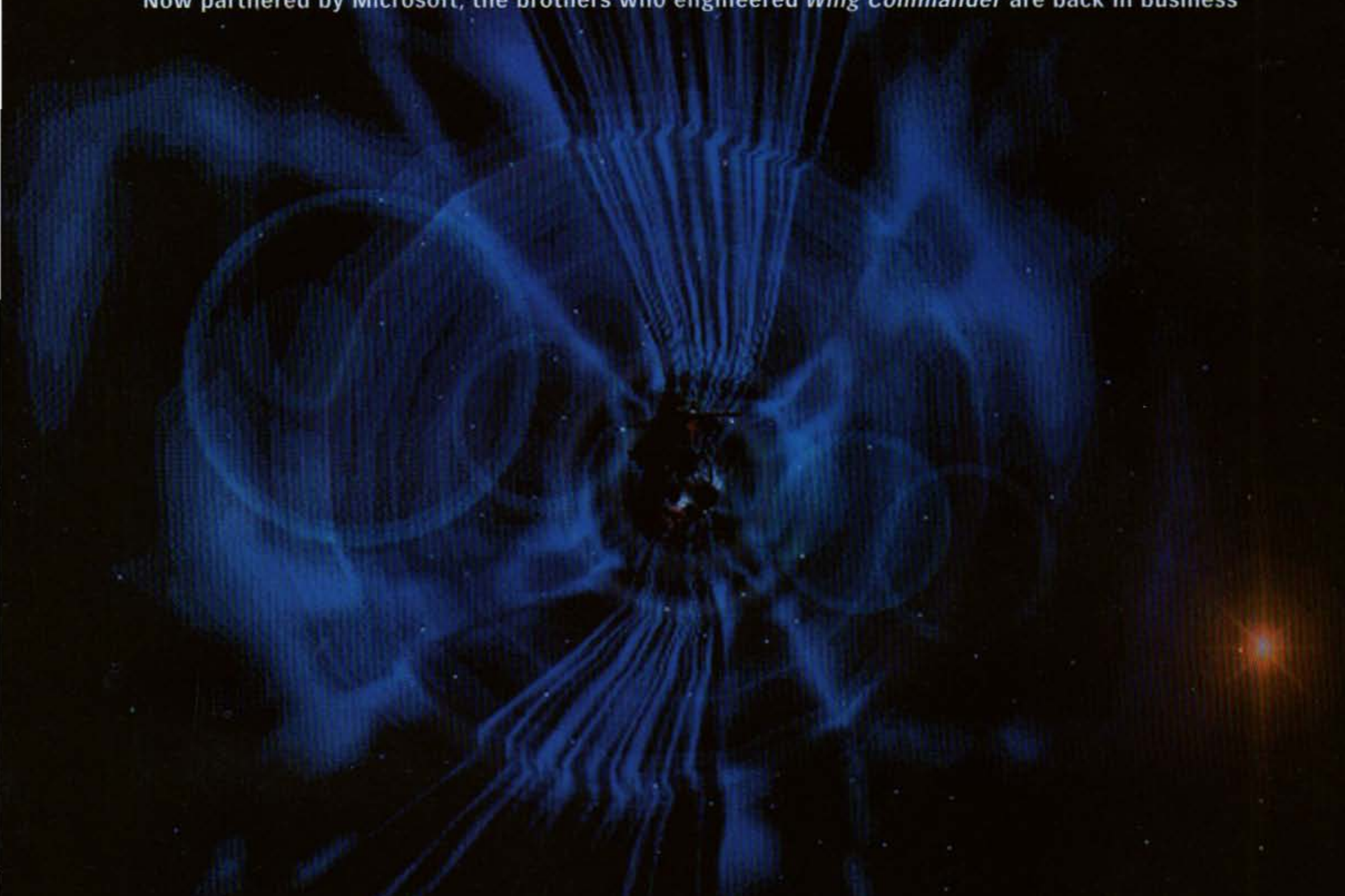




With a formula that consists of a pretty girl with a big gun, Pulse hopes to catch the eye of the casual gamer

Digital Anvil

They claim to have invented 3D space combat, and are famed for Hollywood-quality cut-sequences. Now partnered by Microsoft, the brothers who engineered *Wing Commander* are back in business



Considering they've created both the *Privateer* and *Wing Commander* series, generating millions of dollars in the process, you could be been forgiven for expecting the Roberts brothers to be resting on their laurels by the side of a large swimming pool. But, as Microsoft starts a drive to become a credible games publisher, 1999 is shaping up to be a busy year for its Texan superdeveloper Digital Anvil. "We are concentrating on making what we feel are very strong games," stresses **Erin Roberts**. "At Digital Anvil, we are focusing on the games. That's what's important to us."

It's been over two-and-a-half years since Chris and Erin left EA's Origin studio, unhappy with the commercial pressures they felt were being forced upon them. Tony Zurovec, creator of the successful *Crusader* series, went with them. Since then, not much has been forthcoming concerning the state of play at DA. This year, however, the startup will be shipping its first games, *Conquest: Frontier Wars* and *Starlancer*. Unsurprisingly, considering the history of the company, both games are based in space and utilise large-scale gaming environments. Other games currently in production include the driving shoot 'em up *Loose Cannon* and Chris' long-term project *Freelancer*.

Before any games are released, however, there is a more pressing matter on Chris' mind, the reaction to 'Wing Commander' – a film he has directed and partly scripted. Opening in March in the US, the picture cost a mere $25 million to make and features special effects created by Manchester-based Warthog, one of Digital Anvil's strategic partners. The financial success of the film seems assured, however, following the announcement that Fox is running the next 'Star Wars: Episode One' trailer exclusively with the film...



After the strategy is over, the real battle begins: Terran dreadnoughts start to engage a Mantis battlegroup (main). Each race has different attributes – the Mantis, for example, have long-range weapons and use swarm tactics

Conquest: Frontier Wars

Inspired by the battles of the Pacific fleets during WWII, *Conquest: Frontier Wars* attempts to bring new strategic thinking to the RTS genre. "We wanted to create an epic space saga," says producer Erin. "But we also wanted to make it vast in scope." With a maximum of 16 different areas linked by jump gates, *Conquest* is certainly that. Unlike the earthbound variety of an RTS game, it's not about controlling territory. Rather, you have to concentrate giant fleets in strategic locations. Choosing the best time to strike the enemy is the single most important skill in this game.

With such an enormous playing area, the autonomy AI of the fleets was a big issue for DA. With several separate fleets to control, players have to feel safe that unattended ships can defend themselves. "The trouble with AI in most RTS games is that it isn't as good as you," explains Erin. "In *Conquest*, we have Fleet Admirals to take care of your different battle groups." Not only do they organise fleets, placing valuable capital ships in the centre of the group and arranging battle formations, but they deal with the game's third axis too. Although the graphics run in 3D, players simply drag and click in 2D to move ships around. The AI takes care of the rest. Another addition is the use of supplies. Each ship now has a supply bar as well as the standard health bar. Low supply levels produce a reduced fighting efficiency, forcing players to consider how far they can continue an attack. "We don't want players just building 30 enormous ships and travelling over the galaxy destroying everything," grins Erin.

Unlike an RTS game, it's not about controlling territory. You have to concentrate giant fleets in strategic locations. Choosing the best time to strike the enemy is the single most important skill



While the singleplayer option only has two races available (Terran and Mantis), multiplay (for up to eight players) unlocks the Vyrium and Solarium fleets

Format: **PC**

Publisher: **Microsoft**

Release: **Winter**

Origin: **US**



There are over 80 custom ship designs in *Starlancer*. The largest examples, such as the carrier Reliance (above), are truly immense



Drawing on its experience with the *Wing Commander* series, Digital Anvil is creating an immersive gaming environment. As you fly between space stations, a great deal of background activity is occurring independently of the action



The choice of ship and weapon load-out will be crucial to successfully completing a mission

Starlancer

Whereas *Conquest* is about the bigger picture, *Starlancer* brings spaceship action back down to a more easily manageable firstperson level. In the earth of the future, the Western Alliance, consisting of Germany, Great Britain and the US, has had its fleet destroyed in a Pearl Harbour-style attack by the Eastern powers. As part of the makeshift 45th Volunteer Squadron, you must help turn the tide of the war.

"One of the main things we're trying to do with *Starlancer* is to create a feeling of living space within the game," explains Erin, producer of this title as well as *Conquest*. "We're attempting to create an environment where there's a whole lot of other stuff going on, not just your missions. So, if you go to space stations, for example, there will be cargo tankers loading up and other fleets moving out. You need to feel part of a believable world."

Based on the obsolete carrier Reliant, *Starlancer* begins in the pilots' bunk room. From there you can go on training flights and keep up to date with new technology reports, the status of other pilots, and intelligence from the rest of the war. After leaving the bunk room, you move down crowded corridors to the briefing room. Even onboard the carrier, Digital Anvil is seeking to maintain the dark and decisively moody atmosphere prevalent in the rest of the game.

"The missions are going to be oriented to bring a player into the game environment," Erin elaborates. "It won't just be a bunch of patrols." The strength of the storyline is helped by 25 minutes of *Wing Commander*-style FMVs spread throughout the game. Each of the 28 missions is preceded by an audio briefing, after which, one of 12 ships can be chosen. A rescue mission, for instance, will require a ship equipped with a tractor beam. The specific weapon load-out can also be selected.

The missions themselves, as seen through the spaceship, are fast and furious affairs. And just as in many similar games, communication with wingmen is essential to your overall success. But, as Erin is keen to stress, the full *Starlancer* experience can only be accomplished with multiplayer: "You can play the entire story in either singleplayer or multiplayer," he says. "Up to eight players can play simultaneously, but you can go all the way through the game with the other players coming and going as they please."

The missions themselves are fast and furious affairs. But, as Erin is keen to stress, the full *Starlancer* experience can only be accomplished with multiplayer



While dogfighting promises to be furious, DA believes its multiplayer option will add more to the game. Pilots will be able to communicate during battle (right)

Format: **PC**

Publisher: **Microsoft**

Release: **Winter**

Origin: **US**







Depending on the precise nature of the mission, you can either move around in a selection of vehicles or get out and investigate on foot. For covert operations, a *GoldenEye*-style sniping mode is offered

Loose Cannon

Although a long way from release, *Loose Cannon* could be the title that breaks Digital Anvil into the mainstream market. The brainchild of Tony Zurovec, it introduces a gritty and violent atmosphere to the cerebral thrills offered by its space-based siblings. No surprise that publisher Microsoft, still to release an adult-rated game, is watching its progress with a certain amount of nervous anticipation.

Crudely pigeon-holed as *Metal Gear Solid* meets 'Mad Max', *Loose Cannon* is

In addition to the mandatory jobs that drive the plot, there will be a variety of less structured missions

set in a futuristic America where law and order have all but broken down. As bounty hunter Ashe, you pick and choose your missions, completing them in either a series of 15 customised vehicles or on foot as you see fit. Yet, it's not a mindless shoot 'em up. The completion of missions requires stealth, as Ashe has to infiltrate heavily defended bases to rescue hostages or fulfil assassination contracts.

In addition to the mandatory jobs that drive the plot, there will also be a variety of less structured missions which enable players to earn cash to upgrade equipment and garner knowledge. Because, surprisingly, the most impressive feature of *Loose Cannon* is its enormously detailed 3D environments – including nine US cities as well as time-lapse and weather effects – it seems certain to guarantee a rich backdrop for this hugely promising thirdperson driving/combat game.



Despite the collapse of the government, some form of law enforcement still exists in the cities. As a mercenary, you can earn cash fulfiling police contracts



Ignoring the more violent aspects of the game, the scenery is extremely appealing. Nine cities, including Chicago and New York, have been modelled

Format: **PC**

Publisher: **Microsoft**

Release: **Spring 2000**

Origin: **US**

Crazy Taxi

Calling on '70s cop shows and skater punk sounds for inspiration, AM3 is going up against the standard racing sim with an altogether nuttier experience



The cabinet eschews standard 'not crazy enough' Naomi design

Considering the distinct lack of new racing games at this year's AOU show (see p118), could it be that the arcade dweller's appetite for realistic driving titles has been sated? Of course not, but the current lull will allow space for more offbeat experiments to get an airing – one of which is *Crazy Taxi*.

Fitting in somewhere between *GTI Club: Cote D'azur*, *Runabout* (aka *Felony 11-79*) and *Grand Theft Auto*, AM3's follow up to *Top Skater* requires you to drive a taxi around a bustling city, picking up passengers and taking them to their destinations in the shortest possible time. Shortcuts across parks and through back alleys are possible, but these have to be weighed up against the discomfort and terror experienced by your fare. Scare them shitless and a tip is unlikely to be forthcoming.

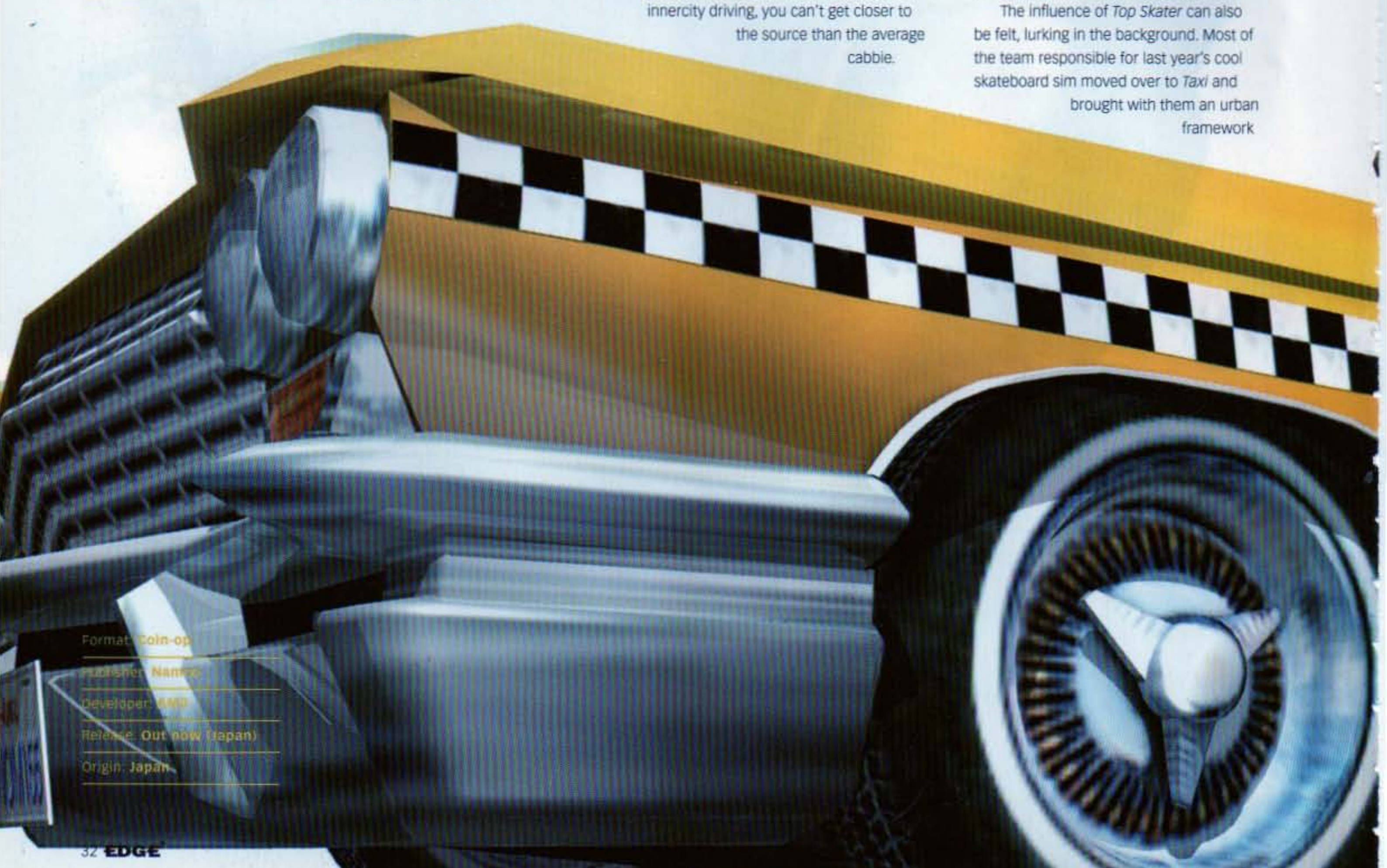
When asked how they came up with the idea for *Crazy Taxi*, producer **Hisao Oguchi** and director **Kenji Kanno** are rather evasive. "We haven't been influenced by Luc Besson's 'Taxi'," offers Kanno-san, "but we *have* been influenced by car chases in old US TV series."

City slickers

Indeed, it was the desire to simulate the volatile, crazed action of a car chase, rather than the skilled precision of an F1 or Touring Car event, that led to the adoption of an open city setting. And from there, it was probably a natural progression to taxi sim – after all, if you want to capture the madness of innercity driving, you can't get closer to the source than the average cabbie.

But influences can be found closer to home. AM1's 1997 racer *Harley Davidson and LA Riders* put players in a series of free-roaming environments in which precarious shortcuts could be taken to cut down on journey time. Sounds familiar. Kanno-san acknowledges the comparison but is at pains to point out how different *Taxi* is: "When you ride a Harley Davidson, the experience is relaxing and enjoyable. An image of wide-open US terrain comes into your mind. With this game we wanted something different – we wanted panic. When another car appears in front of you, you have to avoid it very quickly. Cars are dashing, turning, spinning, and players can use some really speedy drift tactics... So, the driving method is radically different than in *LA Riders*."

The influence of *Top Skater* can also be felt, lurking in the background. Most of the team responsible for last year's cool skateboard sim moved over to *Taxi* and brought with them an urban framework



Format: **Coin-op**
Publisher: **Namco**
Developer: **AM3**
Release: **Out now (Japan)**
Origin: **Japan**





The free-roaming environment leads to a few messy accidents (left) as well as unfamiliar and unexpected settings. Like the seaside, for instance (right)



The *Crazy Taxi* designers have used San Francisco as their inspiration, hence steep hills, tram lines and perpetual sunshine

and a taste for thrash punk tunes ("We use Offspring and Bad Religion for the background music in the game," points out Kanno-san, as though it were a group decision. "It is his personal taste," laughs Oguchi-san). Players can even use other cars as ramps, as in *Top Skater*. Realism, it seems, is not an issue here.

As for the actual mechanics of the game, the team freely admits sacrificing real car handling in favour of arcade thrills. It is, for example, possible to put together a number of 'driving combos', using the steering and acceleration in tandem to pull off insane spins, handbrake turns and impossible powerslides.

Strangely, this OTT gameplay was not in place at the very beginning. "Until the location test, we just developed the game system," explains Oguchi-san. "The taxi simply picked up passengers, and the player could drive freely and use the brakes. The driving feeling was very cool. It was more 'cool taxi' than 'crazy taxi'. After the location test, we concentrated more on the 'crazy' aspect of the game." And all of this is said with a straight face.

Importantly, the setting has been designed to reflect the light-hearted gameplay. Although New York is famous for its yellow cabs, the designers opted for a San Francisco-style environment for *Taxi*. Kanno-san's logic for this is flawless. "We wanted to choose a town with the craziest atmosphere. We also wanted the game to have a positive image, so we selected a city with a sunny climate. We were afraid of New York's underground images." **Edge** is unsure of what images he's referring to, but Manhattan-phobia is clearly rampant in AM3. "New York is very dark," Oguchi states ominously. They've obviously been watching 'Sex in the City'.

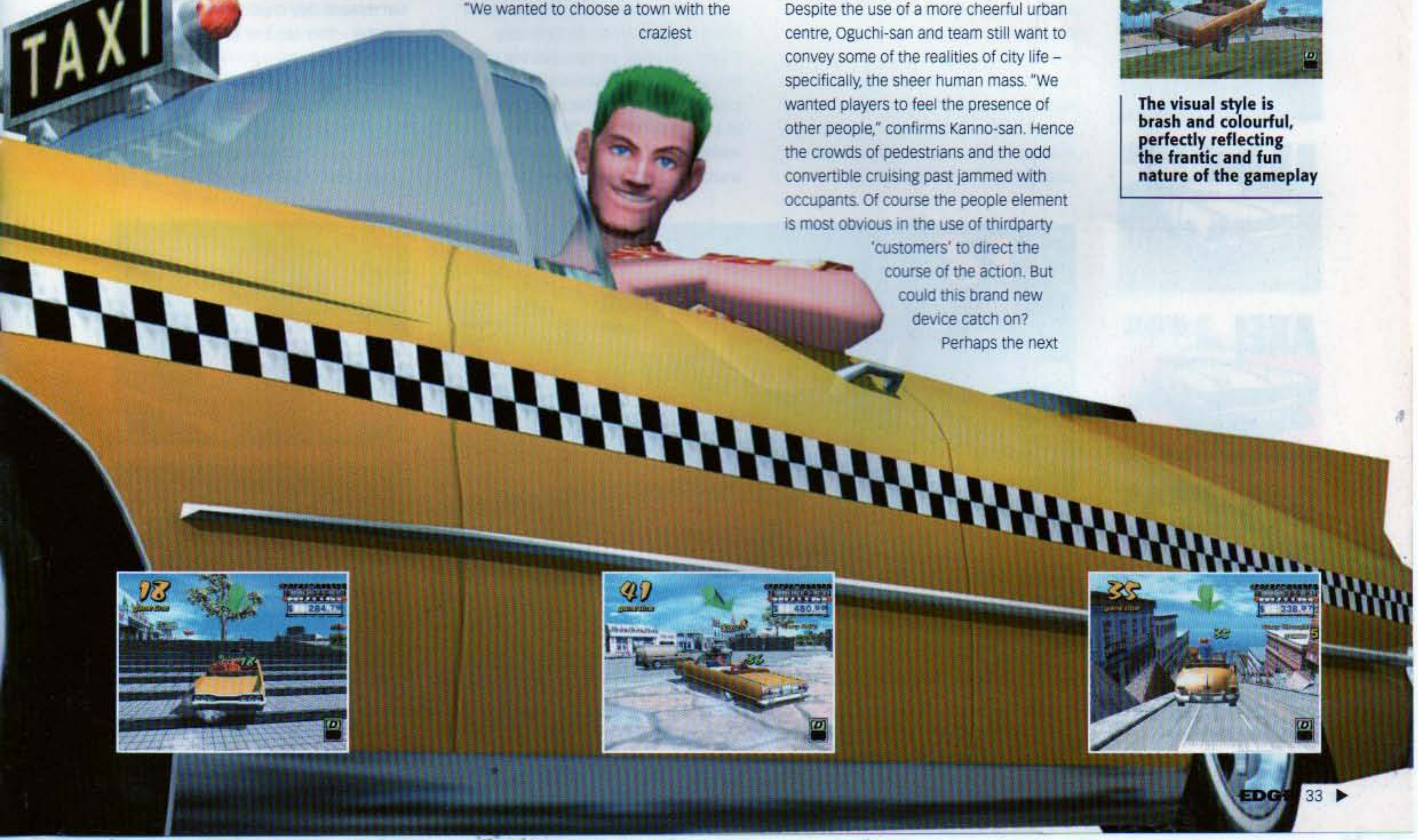
People power

Despite the use of a more cheerful urban centre, Oguchi-san and team still want to convey some of the realities of city life – specifically, the sheer human mass. "We wanted players to feel the presence of other people," confirms Kanno-san. Hence the crowds of pedestrians and the odd convertible cruising past jammed with occupants. Of course the people element is most obvious in the use of thirdparty 'customers' to direct the course of the action. But could this brand new device catch on? Perhaps the next





The visual style is brash and colourful, perfectly reflecting the frantic and fun nature of the gameplay





AM3 director Kenji Kanno.

Ridge Racer will see players stopping to pick up hitchhikers?

Crazy Taxi is particularly interesting, however, for its early adoption of the Naomi format. **Edge** wondered if the use of this 'budget' technology had reduced the need for Sega to capture a mass market and therefore allowed the team to get away with a more leftfield game concept. Oguchi-san is certain this is the

The Naomi board may lack Model 3's Geometry Engine and polygon power, but Oguchi reckons triangle calculation is becoming irrelevant as a visual benchmark



***Crazy Taxi* producer** Hisao Oguchi

case: "The board is not directly related to team creativity. However, because the Naomi board is cheaper, more things can be attempted. In the latest *Derby Owners Club* title, for example, the designers have been able to include a multiplayer link-up mode because the machine is cheap (and therefore arcade operators can buy enough units to make link-up financially viable). The perspective becomes much wider if the cost is low."

Cabinet makers

Actually, the perspective is so wide, AM3 has been allowed to modify the cabinet design. *Taxi* was to conform to the generic Naomi look, until Oguchi-san intervened. "We wanted something to fit more with *Crazy Taxi*'s image, so we asked for a cabinet which allowed players to stand, and for yellow paint instead of white – we wanted a yellow cabinet!" Boom and indeed, boom.



***Crazy Taxi* is packed with pedestrians – giving the game a crowded, inner-city feel. This being California, expect a diverse and offbeat selection of people**

Poor humour aside, it seems that *Crazy Taxi* is not only promising in its own right, as an ambassador of future Naomi developments it hints at the possibility of more experimental designs – something which Sega is particularly in need of since Konami invented a whole new genre with its *Beat-Mania* series.

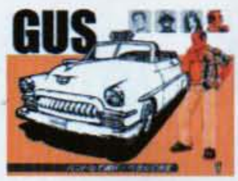
In terms of specifications, the Naomi board may lack Model 3's Geometry Engine and sheer polygon-pushing power, but, interestingly, Oguchi-san reckons triangle calculation is becoming irrelevant as a visual benchmark. "To create a realistic game you need different light sources. Current games often don't calculate shadows, that's why they don't look so real. In terms of realism, light and shadow are more important than the number of polygons. It is the new trend."

Finally, a Dreamcast conversion is, if not inevitable, then certainly highly likely. And true to form AM3 will not settle for producing a straight port (which Oguchi-san reckons they could knock out in two months) – they see that as boring and unfair to home users. If this attitude becomes the norm among Naomi developers responsible for console conversions, Dreamcast will have some vital ammunition to use against a certain piece of Sony hardware...





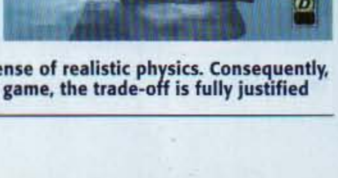




At the outset, players can select from four different drivers, each with their own skills, pros and cons







AM3 has aimed to capture the look and feel of '70s cop show car chases at the expense of realistic physics. Consequently, the driving engine allows for many outlandish skids, spins and turns. In this kind of game, the trade-off is fully justified



RallyMasters

With Digital Illusions at the wheel, Sweden could soon be as celebrated for exporting quality racing videogames as it is for stylish home decor

Format: PlayStation/PC/ **Nintendo 64**

Publisher: Gremlin

Developer: Digital Illusions

Release: **July**

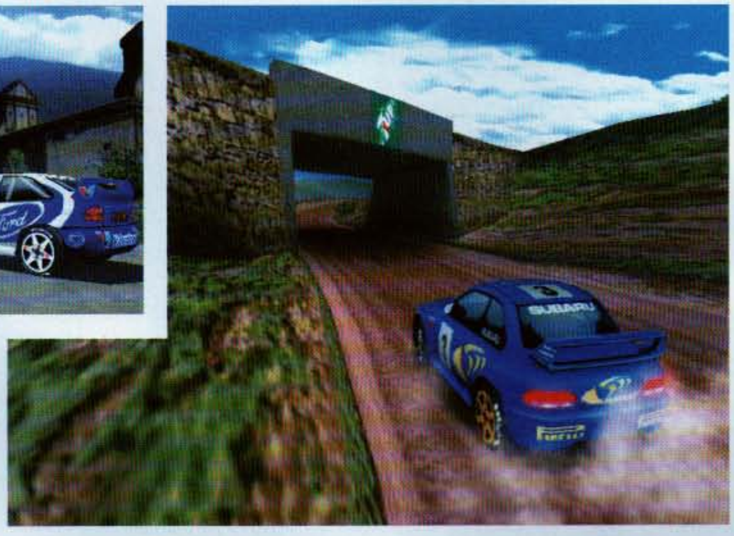
Origin: **Sweden**

Despite being some of the ugliest constructions realised by the human race, airports are great social levellers. Regardless of who you are, or what you do, to get anywhere in the world quickly, the only current reasonable solution is to fly. In other words, you're just another passenger. In the few minutes it takes **Edge** to board its near-empty Sweden-bound flight, Michael Heseltine (complete with entourage of Euro ministers) walks by and stands in front of the arrivals gate; Kate Adie's chauffeur is spotted patiently waiting...

An hour-and-a-half later, and somewhat nearer to the Arctic circle, **Edge** arrives in Gothenburg. The sun is out and there's not a single cloud staining a bright blue sky – a perfect winter's day, in fact, and with the temperature hovering around freezing point, a mild one, too.

This is the home of Digital Illusions, one of the country's premier developers. The company's early ventures into the world of videogaming focused on the pinball simulation market. With just four people, work started in 1992 on *Pinball Dreams* for the Amiga. The [illegible]







The detail evident in the PC shots shown is promising. Although lower res, the N64 and PlayStation versions look impressively close, however



In addition to this season's rally entries, *Rally Masters* features a generous number of additional vehicles, selected from the last two rallying decades

resulting success saw an increase in both staff and product development. *Pinball Fantasies* soon continued where its predecessor had left off and in 1994, *Benefactor*, a *Lemmings*/*Lode Runner* hybrid, also made it onto the Amiga courtesy of publisher Psygnosis. In 1995, after releasing *Pinball Illusions* for the Amiga and PC markets (the PC version was a Frontline Design co-development), the decision was made to focus on 'next generation' platforms. Fittingly, Digital Illusions' first 32bit project was another successful pinball sim, *True Pinball*, released the following year via Ocean on both Saturn and PlayStation.

Realising that constantly producing pinball games – however accomplished – was unlikely to get Digital Illusions into the list of the world's top ten most memorable developers, the team decided to change direction. Yet which genre?

Just for fun

"We picked racing games because it's something we all enjoy playing," explains **Fredrik Liliegren**, Digital Illusions' managing director and executive producer of its latest venture. "That was the fundamental idea behind making pinball games – there were no pinball games so we made one, and we then felt we could do a racing game that was better than the others. So we did *MotorHead* and we signed with Gremlin in October 1997 after showing it at ECTS, and I remember Acclaim calling me an hour after I signed the contract saying *they* wanted the game, but Gremlin gave us what we wanted."



***Rally Masters*' locations – Italy, England, US, Indonesia, Gran Canaria and, of course, Sweden – offer a different and pleasant contrast of environments**

Indeed, most of you probably know Digital Illusions for its solid, very playable and technically impressive arcade-style racer of last year, rather than its expertise within the area of digital pinball. "So we did *MotorHead* for the PlayStation and PC and originally it was going to come out in September '97 but we had an accident with our main PlayStation programmer and that put us back to '98 instead. Then *Gran Turismo* came along and changed the entire playing field," admits a laughing Liliegren. But he claims to be happy with the end result, which was always about having the fastest racer out on the market. "On PlayStation I don't know if we succeeded," he says, "but on PC I still feel that *MotorHead* is basically *the* game that gives the biggest sensation of speed."

Oddly, given the trend nowadays, Liliegren insists a sequel was never on the cards. "After *MotorHead*, we decided that we didn't really wanted to do another arcade racer or *MotorHead 2*," he asserts. "So we started talking about it internally, and then talked to Gremlin about it, and they said 'Well, we have this Rally Masters licence, why don't we do it together?'"

Driving licence

A rally game it is, then. Appropriately, at the time of **Edge**'s visit the last of the remaining competitors in the Swedish Rally (mostly held in the northern Swedish territory, where temperatures are a more seasonal -30°C), crossed the finish line but four days ago. And by ending the gruelling event in a highly respectable third place, Swedish Ford Focus driver (and Colin McRae team mate) Thomas Radstrom has

given his fellow country people plenty to celebrate. Mind you, at £6 for a JD & Coke, rejoicing in Sweden rapidly becomes prohibitive. Generally speaking, in the UK people may moan about the weather. In Sweden it's the taxes.







Each car (PC only) comprises 1,400 polygons (reduced from 130,000-poly model scans) and the various liveries are impressively reproduced

Rally masters

Still, work on *Rally Masters* was started last June and barring any surprises, it should be ready this June. In many ways, it's an impressive project. Rather than simply sticking to its licence (a championship based solely on the super special stages usually incorporated as an extra round of World Championship Rally events, where two drivers race side by side, simultaneously), Digital Illusions decided to go further. Much further. "We feel that there are going to be very, very few rally games out there that offer this amount of different ways to play the game," explains Liliegren. "Basically, we brainstormed every single aspect that we thought had anything to do with rallying and racing, and came up with all these."

'These', as Liliegren puts it, are an additional three categories of rallying – normal stage-based rally *Colin McRae*-style, a rallycross championship similar to *V-Rally* (four cars simultaneously on-track), and an arcade mode *à la Sega Rally* – each boasting an internal structure sufficiently intricate and with enough longevity that they could stand isolated as individual racing titles. The game's six countries, 45 tracks and many more vehicles are distributed among the four championship modes according to their varying requirements. And you can rest assured that the usual time attack, single race, twoplayer mode (four on N64 and more on PC) also make an appearance. As does an intriguing championship editor enabling you to customise your own season by including any aspect from any of the main four styles of racing on offer. Then, as a further incentive to finish all of the modes, there are plenty of bonuses.

There are three categories of rallying – normal stage-based rally *Colin McRae*-style, a rallycross championship similar to *V-Rally* (four cars on-track), and an arcade mode *à la Sega Rally*



The current Digital Illusions team in their oak-floored, halogen-lit, spacious and Ikea-adorned offices

Like probably every other rally game to appear this year, all of the cars currently disputing the 1999 World Rally Championship season are present: Ford's Focus, Peugeot's 206 WRC, the latest Mitsubishi Lancer Evolution, and the Skoda Octavia, to mention but a few. In addition, classic rally cars and the illegal Group B killers (banned as a result of their tendency to plough straight into the nearest group of spectators after their drivers frequently lost control of the 600bhp under the bonnet) have also been modelled, and form an integral part of the proceedings.

Console catch up

Graphically and sonically, everything is equally promising. Predictably, the PC version is clearly the most aesthetically pleasing, but the other two are doing a remarkable job in trying to keep up. However, in order to save the framerate, don't expect the N64 to be making use of its 4Mb Jumper Pak. Of all of them, though, Liliegren is particularly proud of what his team has been able to extract from the PlayStation. "I think we have one of the best 3D engines out there at the moment," he says. "Some people say it's running in hi-res because it looks so stable, but it's not – it's a big complement to our programmers – it just looks very, very stable."

But then, as *MotorHead* so clearly demonstrated last year, the Scandinavian developer was unlikely to encounter any technological problems. "We know technology because we're from Sweden," states a confident Liliegren, "it's our forte."

Here's hoping the gameplay conforms to Japanese standards, then.



Digital Illusions' first concern was to make the physics model (which applies force individually to each wheel) as realistic as possible



Project Velocity

Extreme sports have, on the whole, been ill-served by videogame creators. Criterion Studios is about to make amends with a stylish, hoverboard racer for the next generation consoles. Time to cruise...

What purpose speed without style? That's the conundrum being posed by Guildford-based codeshop Criterion, responsible for motorbike sim *Redline Racer*. The Canon-owned group has been toiling these past 12 months to deliver a credible answer to this question, and seems to have found a solution with the tentatively titled *Project Velocity*.

Littered with postmodern nods to skate culture and cyberpunk, Criterion's title is a hoverboard racing game destined to wow Dreamcast owners later this year. The project is among the first wave of western games to be confirmed for Sega's new console, with a sister PC version also in the works. While extreme sports titles have generally had something of a rough ride in the translation from reality to digitality, *Velocity* is more promising than most. There have been a few notable exceptions, not least Nintendo's *1080° Snowboarding*, which the team at Criterion is claiming as an inspiration.

Street wise

"I'm a really big fan of the way Nintendo handles everything from the moment you pick up a a game – there's no holes for you to get lost in," begins designer **Craig Sullivan**. Working from an initial concept generated by lead artist **Ed Hayden**,



The natural inclination for gamers and skaters to show off is indulged



With nine detailed boarders on-track and richly populated worlds to explore, it's clear that Criterion's game is well-endowed in the engine department

Sullivan has jammed a wealth of street-savvy skateboarding culture into the game. "I used to skate when I lived back in Cardiff," he confesses, "and a lot of my friends still skate now – three or four are professionals. So I still go to competitions and do a bit of research."

Set in yet another near-future world, the game is – true to those skating roots – not just about being the quickest along a given course, but also about being the most chic. But that's not to say that the game is all style without substance. Through careful deployment of certain cunning tricks and stunts, your chosen character can be made to smash through glass barriers, or shift into a different method of controlling the hoverboard. So, instead of merely standing atop the deck, the racers can lie down on their fronts or lie back in a luge position to achieve higher speeds. In addition, each of the nine selectable characters is able to execute their own specific attacks and stunts, such as the Russian boarder's spinning Cossack dance move.

Pulling stunts

"The point of the whole stunt system is the fact that it's a one-button press system in its basic form," explains Hayden. "Then it builds up into these massive combos, a bit like a fighting game." Judging by the demonstration given to **Edge**, mastery of the control system can result in some seriously memorable stunts being performed. According to Sullivan, "That's a typical Japanese thing. Take something like *Street Fighter*, you can watch someone play it in an arcade and you'll know within ten seconds whether that person is good. That's the difference between being good and being really good. I want that to be apparent in this title."

Rather than relying on hand animation or motion capture, a highly effective hybrid of traditional preset sequences coupled with physics-calculated motion has been created

Given the wonderfully fluid motion of the characters as they flow from flips to rolls, or from lying down to executing a handstand, players are certain to want to achieve virtuoso status. Creating such a believable animation system has been no small obstacle for the programming team, however. Rather than relying on hand animation or motion capture, a highly effective hybrid of traditional preset sequences coupled with physics-calculated motion has been created from scratch. Described by the team as a 'layer'

Format: **Dreamcast/PC/ PlayStation 2**
Publisher: **Acclaim**
Developer: **Criterion Studios**
Release: **Autumn**
Origin: **UK**









Because of the spline-based construction of the tracks, each of the three cities has a total of 15 courses for you to complete. In addition there are various sub-games, such as competing in half-pipe events to win new boards

technique, the characters' movements are generated on the fly.

"We have an unlimited range of poses that depend on the physics – what speed you're going, whether you're turning, and what orientation you're at," explains lead programmer **Sean Turner**. Watching a character shift and match the landscape as it races beneath them is enjoyable in

If all goes to plan, up to 16 players will be supported for Internet play by the PC and Dreamcast versions, a vast improvement on *Sega Rally 2*'s meagre fourplayer action

itself, a step beyond *1080°*, the current benchmark for such animations.

Time sensitive

Understandably, building such a complex routine takes time, so far devouring three-quarters of the development schedule. "The real challenge on Dreamcast is that you have less CPU power than we're used to," adds Turner. "You have to be careful doing a lot of computations and complex physics."

All the effort expended on the physics engine doesn't appear to have impaired other aspects of the game's construction. Just as in Bizarre Creations' forthcoming Dreamcast racer *Metropolis*, Criterion's levels are staged around actual locations, namely London, Manhattan and Tokyo. ("We went over to Acclaim in New York, and Craig toured London on an open-top double decker..." reveals producer **Fiona Sperry**.) However, the futuristic setting allows some creative freedom, thus Tokyo is partially submerged beneath a post-global warming flood.

Interactive entertainment

An emphasis has also been placed on exploiting the polygon power of Dreamcast and high-end PCs, creating interactive locations populated with



The Criterion team is planning to support Dreamcast's cute VMS unit with a number of takeaway games intended to complement the main experience



As the game is explored, more ways of guiding your board will be revealed. By dropping into a luge position it's possible to increase speed, or by lying face down you can perform attacks



Producer, Fiona Sperry



Game designer, Craig Sullivan



Lead artist, Ed Hayden



Lead programmer, Sean Turner

numerous pedestrians and vehicles. At one point it's even possible to surf up onto the roof of a passing train and ride along it. Other more devious tactics can also be employed: "Say, for instance, you're going down the track and there are crates and stuff in the way," illustrates Hayden, "you can knock them into the path of people behind you."

Across each of the three cities there are a total of 15 courses to complete, opening out from a central hub area, a concept inspired by another of Sullivan's cited influences, *Diddy Kong Racing*. Once a full city has been uncovered it's possible to create your own routes around it, thanks to a spline-based approach to the track design. You can piece together a circuit or route from the various level sections to create a new race, which can then be saved either to the PC's hard disk or to Dreamcast's Visual Memory System.

The team has far greater things in store for the VMS, however. "The whole idea is being able to take a [VMS] game away, and it not be a Tamagotchi," reveals Sullivan. "So what we've got is little mini-games that are themed around the boards you get in the main game." New hoverboards become available via completing several pre-ordained challenges scattered throughout, such as pulling stunts on a half-pipe, with the rewarded decks better suited to certain courses than the standard one. Each of these boards can then be powered-up by playing the VMS mini-games, with the jet trail behind your deck reflecting your success in the game.

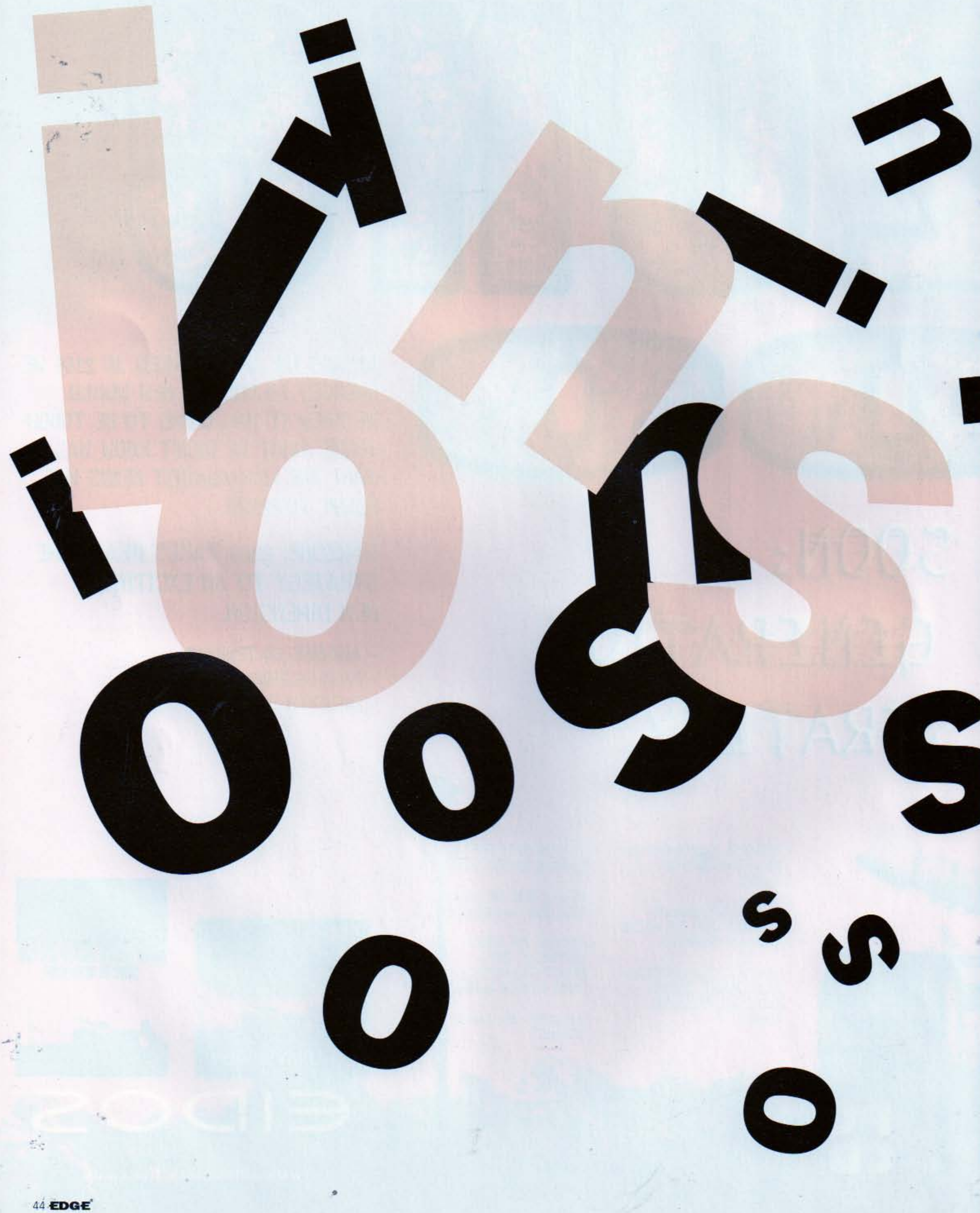


The animation is a wonder to behold. It's driven by physics to create a natural feel

Multiplay... maybe

The Criterion team is also busy finalising multiplayer support for Dreamcast – although, as Sperry says, "That kind of depends on Sega's plans. It's likely that in the US it will go out with a modem. Sega hasn't confirmed what it will do in Europe." If all goes to plan, up to 16 players will be supported for Internet play by both the PC and Dreamcast versions, a vast improvement on *Sega Rally 2*'s meagre fourplayer action. If all thirdparty developers are being this ambitious with their online plans, Sega's servers could well be in for a tough time next Christmas...

There's still some way to go before Criterion hits its projected velocity, but judging by what's on offer, it could be setting the pace for others to match. And with a licensed music deal on the cards, plus five more months of quality development, the team has plenty of time to indulge in a bout of hefty spit and polish work. Sega's 1.5-party games had better beware – there's a new kid on the block with enough cred to eclipse them all.



Dogged by software delays, and scarred by staff losses and accusations of mismanagement, highflying US developer Ion Storm has come down to earth with a bump. Is the company that spends millions when thousands will suffice all flash and no dash? Can Jon Romero's *Daikatana* save the day? In Dallas it's make or break time…

In Dallas, Texas, money speaks volumes. And for start-up developer Ion Storm it speaks as loudly as 22,000 sqft of hi-tech swankiness perched in the penthouse dome of the Texas Commerce Building – an impressive habitat for a business more used to being holed up in sprawling business parks. But then Ion Storm is hardly your typical games developer.

Its story is an intriguing one. And its most recent developments have come to light in the form of a scathing and exhaustive report published in local newspaper, *The Dallas Observer*, that suggests the company has gone clean off the rails, spending $26 million of Eidos' money in the process. If the paper's divulgence of intimate details concerning reckless spending, incessant management squabbles and staff departures are taken at face value then it shows how money, greed and egos as tall as the skyscrapers that contain them can eclipse and undermine the creative integrity of a company. Ion Storm maintains the article is unfair and biased and is currently engaged in a lawsuit with the paper.

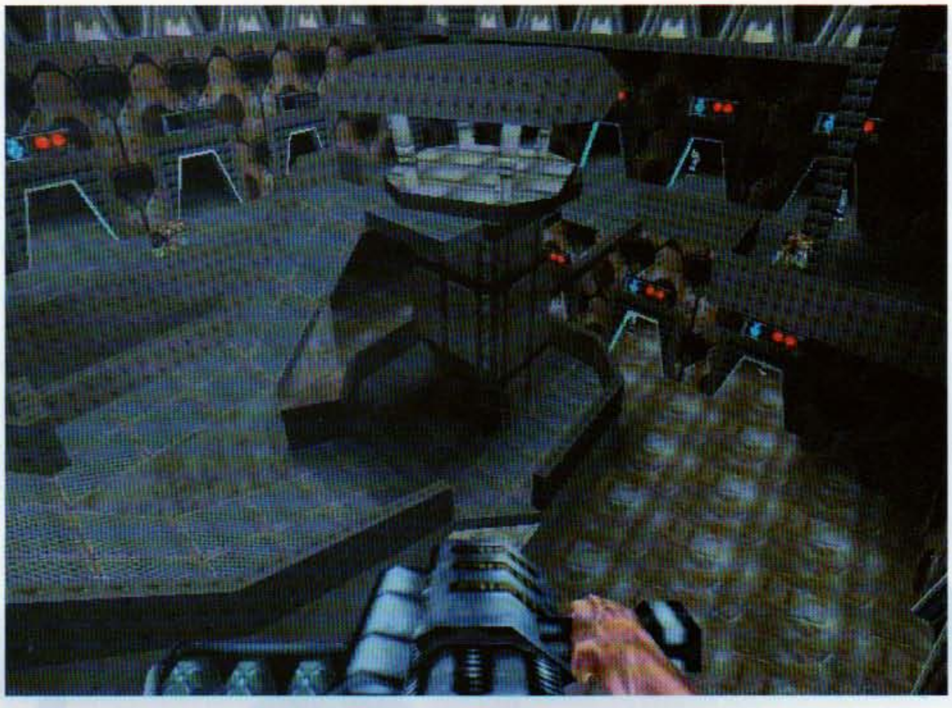
Ironically for a company that has spent millions fashioning a high-profile media-savvy image, the Texan developer is thrust back into the spotlight – but for all the wrong reasons. Whereas its carefully hyped über-developer profile may have garnered it valuable column inches in US journals such as *Time*, *Newsweek*, and *Wired*, its recent troubles have had its most cynical detractors rubber-necking with the kind of glee reserved for a broken-down Ferrari owner stranded at the side of the road.

Keen to put on a brave face, Eidos has therefore invited **Edge** to Dallas. This is hardly a chance for the company to set the record straight, though. Its current involvement in legal proceedings means it can't, or won't, discuss details about the case. "I think the rudder on this ship had some holes in it," admits marketing VP **Mike Breslin**. "But now we've patched them up and I think our games are going to speak for themselves."

The games in question include the infamously delayed *Daikatana*, a title that was originally scheduled for release in March '98. When quizzed about why it has taken so long (and dragging the company's name into the dirt), Breslin is on the defensive: "Look at *Unreal*, that took three years. Look at *Half-Life*, that took two-and-a-half years. Why didn't they get the same treatment? Because they didn't come out of the box saying how good they were. That's something we have to live with. The company is running better now than it was a year ago and we're refocusing our energies – everything is about our games."

Ion's immaculate working environment is a conspicuously styled amalgam of white walls and custom-designed metal cubicles enclosed in an enormous glass dome. As you walk around it's clear that work is at full pace on *Daikatana*, the project that suffered most in light of recent events when eight of its key players walked out (joining ex-Ion Stormer Mike Wilson at rival softco GoD). With replacements quickly found, though, there's a renewed commitment to finishing the troubled title. And as if to show it means business the company's *Defender*, *Tekken 3* and *Scramble* arcade machines are all switched off, each bearing an ominous warning from the management that they should be left off, too.

But *Daikatana* isn't the only reason **Edge** is in Dallas. Two other anticipated titles in Ion Storm's roster – cinematic RPG *Anachronox* and Warren Spector's *Deus Ex* – are also scheduled to appear later in the year. And judging by the potential quality of both, if Ion Storm can focus its energies on ensuring they're as strong as they promise to be, then it could well find its tarnished reputation is quickly forgotten about.



***Daikatana* looks set to combine all the best traditional elements of firstperson shooters with some novel concepts, such as helpful sidekicks and world-specific weaponry. Use of the eponymous sword will be crucial**

Daikatana Format: PC Release: May

Jon Romero chuckles uncontrollably as he watches his creation presented on a big screen in Ion Storm's plush corporate-friendly auditorium. He's laughing because an unfeasibly large number of bad guys are on the tail of his colleague demonstrating the game. He squeals with delight as the army of muscle-bound foes drop one by one, piece by piece, as a torrent of gunfire is unleashed upon them. And he takes further pleasure from watching the blood splatter on the walls and body parts bounce around the floor. Everyone else watches from the comfort of black leather armchairs perhaps wondering if he's spent a little too much time running around in dark corridors with guns.

Despite the fact that the lacklustre *C&C* clone *Dominion* was Ion Storm's first commercial release (although the core of the game was designed when in the hands of 7th level and Todd Porter), *Daikatana* is the title upon which Ion Storm's fortunes ultimately rest. First shown running on the original *Quake* engine to a muted reception at the 1997 E3 show, Romero's project received a technical leg-up in the form of the switch to id's beefier *Quake II* code, but progress hasn't been smooth since. The recent departure of the infamous 'Ion eight' – the core team members who jumped ship just a few months ago – was just the latest in a series of setbacks that has kept the epic shoot 'em up from store shelves.

With a tentative May release in the pipeline, it's a testing time to see if the title can match up to the graphical standard of the current firstperson benchmarks, *Unreal* and *Half-Life*. But with so much work still underway, it's a little early to pass judgement

The four time zones are already looking well-realised and there's an impressive total of 64 gruesome foes and 32 devastating weapons, despite these numbers having been scaled down from those in its original blueprint






The action is spread over four different time zones which include (clockwise from top right) a medieval theme, contemporary San Francisco, Ancient Greece, and futuristic Japan, which is the hero's starting point

just yet. Of course, a bullish Romero is confident that it will live up to expectations: "You know, people have been blown away by *Half-Life* here," he concedes. "It's a totally awesome game, but we're really confident that our game is better. There's a strong storyline, great monsters, tons of great weapons and cool sidekicks that go through the game with you."

The singleplayer game encompasses four self-contained worlds – each set in its own time period reflected in the design of the individual environments, monsters, and weapons. You play through the game as Hiro Miyamoto, a descendant of a famed swordmaster who forged the original daikatana sword back in the 16th Century. The quest involves hunting through each time period for the fabled sword with the help of two sidekick characters – Mikiko and Superfly – who assist you through the game. However, you'll need to watch their backs, too.

During **Edge**'s visit only the deathmatch version of *Daikatana* is playable and work is progressing fast on a demo to be made available soon. Deathmatch *Daikatana* – at least, the version **Edge** played – is enjoyable if not sufficiently different to its competitors. It moves blindingly fast, the weapons are impressive enough and the incorporation of weather effects like fog and rain will provide new elements for players to deal with. But only time will tell if it has the magic recipe that will keep networks buzzing.

It's just possible that the game's strongest draw will be its singleplayer game – a direction in which titles such as *Quake II*, *Unreal* and *Half-Life* have set a challenging pace. The four time zones – ranging from darkest medieval Norway to post-Apocalyptic San Francisco – are already looking well-realised with superb atmospheric effects and an impressive total of 64 gruesome foes and 32 devastating weapons (which include the beautifully rendered Eye of Zeus, and the metamaster – a 'BFG-type fragmaster'). (All this, despite these numbers having been scaled down from those in its original blueprint).

The firstperson shoot 'em up is an intensely competitive arena, and no one knows this more than Romero as he guides his designers through the final stages of the game's completion. Ion Storm's most popular project is therefore expected to make an appearance in May at this year's Los Angeles-based E3 show.



Weapon effects make good use of the engine's excellent coloured lighting









Although previously a little-known title, the dark and futuristic *Deus Ex* promises customisable gameplay which, for example, enables you to specialise in stealth-based or frantic out-and-out action. A key feature

Deus Ex Format: PC Release: December

The work of Warren Spector and his team, *Deus Ex* (taken from the Greek 'God from the machine') is a game which seeks to redefine the RPG genre. Described as a real-world role-playing game, set some 50 years in the future, the world is at the mercy of terrorists, and the global economy is close to collapse. Playing the part of an anti-terrorist agent, you will have to follow clues around the world to discover who or what is behind the sinister conspiracy which threatens to bring the world to its knees. Accurately modelled real-world locations feature in the massive array of locations which must be visited over the course of the game, including recognisable parts of Paris and New York.

Using the much-admired *Unreal* engine, interaction, exploration and combat combine seamlessly to create what is probably the best attempt **Edge** has yet seen to meld the RPG and firstperson-shooter genres. Interaction with objects, environments and people is being made as realistic as possible – conversation strings are particularly well implemented – but the game also aims to provide moments of dramatic action to rank alongside shoot 'em ups such as *Half-Life*. To this end, a fine selection of weapons and equipment will be included for your destructive pleasure. However, since this is primarily an RPG, you'll have to make very important decisions about exactly *how* you intend to play the game.

For instance, how about specialising in heavy weapons? How about adopting stealth, lockpicking, or sniping techniques? To this end, the player's character is truly customisable, in traditional role-playing style, with a number of skills and nano-technological implants. However, these will be very limited in availability, so you will have to make full use of them, and actually play the role you have created for yourself. Each problem or puzzle that the player encounters can be dealt with in a number of ways, according to the players' abilities and inventory choices. You therefore choose whether to knock down the locked door, or try to pick the lock? Blow it open blithely with the shotgun, or use augmented hearing to find out if there's anyone around?

You'll have to make very important decisions about exactly *how* you intend to play the game

Deus Ex places such decisions firmly at the feet of the player, and in doing so sets a bold precedent for the firstperson shooter, adding a dimension of decision-making not seen in the genre since *System Shock*. It's not due until Christmas at the earliest, and Ion Storm has both *Daikatana* and *Anachronox* to release before then – but in many respects, *Deus Ex* is one of the most exciting projects currently in development for the PC.







As well as the length and breadth of the various worlds to explore, the plot has equally grand intentions. It begins quite light-heartedly, but later on more complex relationships will be built and as the game progresses and characters betray you, you'll really care about it

Anachronox Format: PC Release: Autumn

While Romero's visceral *Daikatana* represents a logical progression for the firstperson shooter, Anachronox is set to blow apart the conventions of another established PC genre – the role-playing game. The brainchild of **Tom Hall**, one of the founders of id software, Ion's second release is an ambitious fusion of PC technology and console-style gaming – and it's already looking rather special.

Taking its inspiration from Square Soft's low-profile but well-loved SNES title *Chrono Trigger* – one of Hall's (and Romero's) favourite games – *Anachronox* is a cinematic, character-driven RPG, complete with turn-based battles and a truly enormous world to explore. Unlike console examples, though, *Anachronox* builds a convincing world from the realtime 3D environments more synonymous with firstperson PC games. And a simple demonstration of how its flexible camera system works is enough to raise the eyebrows of the most cynical of onlookers.

Obviously also inspired by *Final Fantasy VII*'s cinematic elegance, Hall's game goes one better by employing realtime environments throughout so that there's no visible jarring between the in-game sequences and the breathtakingly choreographed cut-scenes. "For me, a constant sense of reality is important," reveals Hall. "If you're in a game and you see this great rendered cinematic and all of a sudden you're in a tile game, there's this jarring point where you don't feel you're in an immersive reality. So we've designed the engine to be good enough to handle the cinematics as well as the core gameplay."

Thankfully, though, *Anachronox* will have more than just technology as a selling point. Equally impressive is the work that's gone into developing the storyline and cast of around 450 non-player characters (NPCs) which inhabit the galaxy and feature in 100 levels.

Inspired by *Final Fantasy VII*'s cinematic elegance, *Anachronox* goes one better by employing realtime environments so that there's no visible jarring between the in-game sequences and the cut-scenes

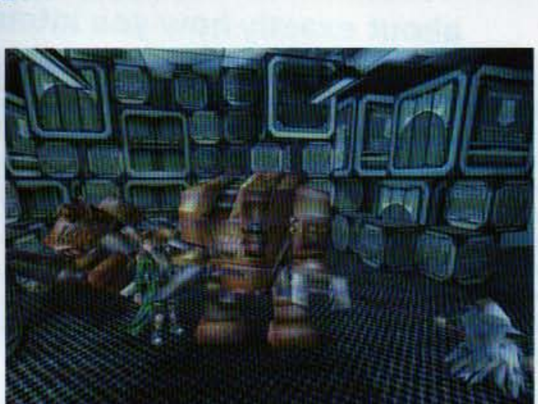
Each of the characters also has a set of mini-games as adjuncts to the core gameplay and there are a goulish total of 120 monsters to confront, in various guises. Hall concedes that this is where his admiration for Japanese RPGs comes in. "The console RPGs are a big influence from their strong focus on story. For instance, at one point in *Chrono Trigger* you're sitting around with your friends and they're talking about the theme of regret. The very fact that characters could be talking about something as interesting and subtle as regret in a game – instead of clubbing each other over the head and taking their gold – is a novel approach. It makes the fighting and adventuring and stuff so much deeper when there's a reason for what you are doing."

Battles are being tackled intelligently too – and particularly in light of the derision that's often levelled at *Final Fantasy*'s random and irritatingly frequent bouts. Instead, Hall and his team are concentrating on a more contextual system (again, like *Chrono Trigger*) so the player won't be tripping over invisible points every five feet, triggering off unwelcome conflicts. The designers are even planning to ship the game with the custom tools that it's using to create the game, thereby enabling a Net-based community of potential fans to tinker around with their own scenarios – in a fitting nod to the DIY wad culture inspired by *Doom*.

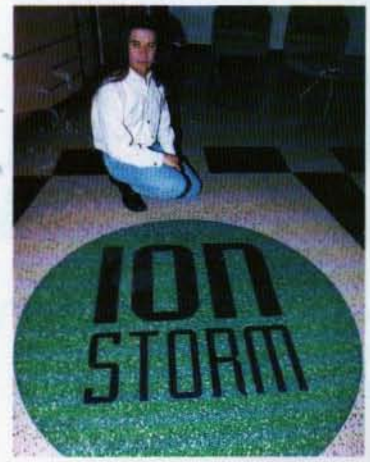
"*Final Fantasy* was really awesome and dramatic," concludes Hall, "and there are certainly some memorable emotional points. But I want real drama to come out of this. It's going to be a very interesting experiment to see if people can get really emotionally upset about a videogame."



There will be living, breathing battles where the camera is an integral component – depending on where the monsters are lurking



Inside the mind of Jon Romero



GQ magazine hailed him 'the Quentin Tarantino of computer game megaviolence,' while *Time* magazine suggests he 'wears the mantle of pop-culture godhood with aplomb.' He drives a yellow – yes, yellow – Ferrari Testarossa modified with a nitrous system to growl to the tune of a frightening 800bhp. And he sports a mane of black hair long enough and shiny enough to embarrass Cher. But sadly, the rock-star caricature ends there. Whatever else needs to be said about Jon Romero, you can't ignore the fact that he is as hot as game development property gets in the US. While the most important game of his career strides back into the limelight, **Edge** corners him for a chat...

Edge: It's over five years since *Doom* appeared. Did you have any idea how big this whole firstperson shoot 'em up genre would become?

Jon Romero: No, not really. We knew it was a cool type of game, but we didn't know that there would be so many imitators. Before *Doom* there were a lot of games that you could call clones, but now this type of game has become a popular genre in itself – it's moved on from just cloning.

Edge: But now vast sums of money are necessary to create games like *Daikatana*.

JR: It takes a lot of people and it takes a lot of time. To me, time is the biggest issue because everyone is constantly trying to stay ahead of each other. The big difference between working on a project like *Doom* and one like *Daikatana* is that the team is bigger, and that costs. And, of course, the games have to look good. I mean, everybody is expecting *Forsaken*-type flare effects, and alpha-blended this, that and the other. And that all costs, too.

Edge: But does all this investment really add to the gameplay experience?

JR: Well, there's so much ground that's been covered already – everyone is trying to push the boundaries. What's next? There are usually incremental steps once the revolution has happened. I don't think that you can really have a revolutionary thing happen unless it's defining another genre. You can't have that happen unless it's going to transform that genre into something else. If people see *Quake III: Arena* as a revolution in firstperson games, then it's due to the creation of the multiplayer-only game – in this genre the revolution has pretty much happened, things are just getting more clearly defined.

Edge: So are you keen to lead the next revolution?

JR: Yeah, definitely. I'm always thinking about what we can do next. I have cool ideas for what I want to do with the singleplayer genre. You know, I still love the shoot 'em up. I still love going and destroying shit. But how can we do that in a cooler way? For example, you buy a game and you run it, and you play through the singleplayer game – and boom! You're done – and you start to play multiplayer forever. I have an idea for having a replayable singleplayer game where when you finish it you then play it again to see how it's going to change. For it to work you need to have multiple starting points within the story – different levels, basically – you've got to have different story paths that the player can choose to go through, and you'd have to have a ton of levels – 50 minimum.

Edge: Is this your next project?

JR: This is what I'm planning on doing after *Daikatana*, to push the genre forward into some other new area and see if it takes or not. The player starts the game and chooses what character they want to be. The character is kind of tied to a different location in the game – their home town or whatever. So you move along, go through some levels, meet people who give you information and you'll reach points where you choose where you want to go. For example, are you gonna decide to go down into a dungeon or over a bridge? Your path through the game completely changes depending on which direction you go. If you decide to go over the bridge you won't see the dungeon level unless you replay the game from the start.

"I have cool ideas for what I want to do with the singleplayer genre. I still love the shoot 'em up. I still love going and destroying shit. But how can we do that in a cooler way?"

Edge: What does Jon Romero spend most of his days doing?

JR: The first thing I do is answer all my emails, because I'm responsible for every aspect of the design from the programming to the map design, to the art – it's decision-making all day long. I don't get too immersed in the scheduling – what I'm concerned with is matters like 'Is this weapon doing what it should?', 'Is it animated well enough?', 'Do the maps flow correctly?' Someone else does scheduling.

Edge: And schedules must be a sore point at the moment...

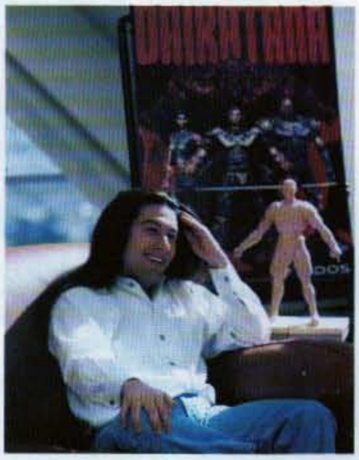
JR: Changing over to the *Quake II* engine is pretty much what delayed *Daikatana*. We thought it would be an easy change but it wasn't. Carmack [see p108] had been rewriting everything, so nothing that we created, other than the monsters – the actual models – could be used. So we had to start pretty much from scratch. The other big difference is working with people that have not worked on 3D games before.

Edge: You have people that haven't done 3D before?

JR: Well, there aren't that many 3D games out there. People may have done 3D programming here but nobody has actually been on a 3D game before. It's really hard to recruit people who have already been part of a successful title, so you have to go with people that know 3D but simply haven't had the chance to work on a cool game. At id, when we were creating *Quake* we'd already done *Wolfenstein*, *Spear of Destiny*, *Doom* and *Doom 2*, but here it's different – we've got people trying to learn how to do it. It just takes longer because these guys need to understand it a little bit more.

Edge: And eight people leaving the team can't have helped.

JR: When you have people leave it takes time to get new people up to speed. But in actual fact the people that did leave weren't working hard anyway and now we have people that are really keen.



Those that stayed have been amazed at the progress we've made in the past few months, and now there's none of the negativity that we had before.

Edge: In light of the recent controversy, do you wish that you'd kept a lower profile?

JR: We wanted to make sure that people knew Ion Storm – we haven't tried to push me. The press has always been asking to talk to me and take pictures. They're interested in it. The games industry is asking for me and obviously I'm not gonna say 'No! Stay away!' The higher up you are the more people are likely to want to take you down. It doesn't matter if you're the most noble, saintly person on the planet, the fact is that people are gonna hate you more than anything.

Edge: Do you have any desire to design console-type games?

JR: The ideas for *Daikatana* came from *Chrono Trigger* and *Zelda*. I love *Zelda* and those kind of games but I think if I tried to design that kind of thing then other people could come up with better ideas – 'cause cutesy isn't really my thing. You know, you've got to have the mind for it and I'd rather stick with what I'm good at. Because I know that I can always come up with something nastier than something cute.




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Switched on

'GamesMaster' and 'Bad Influence' may have taken videogames to the masses on TV, but their time has long since passed. Now, where are their successors coming from? Edge investigates

Do broadcasters understand the videogame industry, and issues pertaining to it? It's an interesting – and illuminating – topic of discussion. Polling individual commissioning editors, producers and researchers at major terrestrial channels would elicit a variety of responses. Some may own a PlayStation. Others might comment that working hours are illicitly consumed by anything from *Win95 Solitaire* to *Civilization 2*. Those born well before the advent of home console technology could remark that their children play games – and they, by contrast, do not.

As a leisure pursuit, videogames and hardware platforms are very much mainstream products. If a High Street has a McDonalds, Halfords, or Waterstones, it is almost certain to have an Electronics Boutique or GAME, or one of many, many independent software stores. The videogame industry as a whole boasts revenue comparable to (and, some statisticians would argue, in excess of) the cinema and music industries. It's also a market in ascendancy, sure to expand well into the new millennium.

In the week ending December 21, 1998, Sony sold 128,000 PlayStations in the UK. Between October 1998 and January 1999, BSkyB claimed 350,000 digital sales – of which, 120,000 were to 'new' customers. ITV spends £200m per year on regional programs for fourteen different regional areas. The total UK software sales over the '98 two-week Christmas period were £95m. Illuminating figures? Yes. And no. Perhaps the most surprising TV/games statistic Edge can offer is that between February 13 and 19 this year, exactly one half-hour was allocated by terrestrial TV for dedicated videogames programming – much as it had been the week before. And the week before that...





'Sub Zero' – the BBC-friendly face of gaming. But will the Beeb go any further?

'Sub Zero' is the closest to dedicated games-oriented TV that the BBC has produced so far. Due for broadcast from the middle of February '99 for a six-week run, it's a melange of technology – a lot on the Internet, a little about games – wrapped up in a girls-against-boys 'competition' format. A live show, it incorporates audience participation – from email messages displayed onscreen, to a Web-based treasure hunt – with the antics of its youthful, gender-based teams. Most importantly, though, each episode features a specific challenge on an arcade machine or console.

Obviously pitched at a younger audience, 'Sub Zero' is not a programme made with the average **Edge** reader in mind. It is, however, a telling toe in the water from a broadcaster which has spurned the videogame industry so far. The team behind it, conscious of attitudes toward videogames within the BBC, appear acutely aware of that fact.

"Why is it that kids want to play computer games? Essentially, that was our starting point," says **Malc Goodchild**, producer on 'Sub Zero'. "As a programme-maker, having worked in the department for four years, I'm all too conscious about how everyone [in the BBC] feels about games in general. So I began self-editorialising. I was the one that was questioning myself all the way through – 'Is this going to make exciting television?'

"I think the problem with gaming programmes generally is that they're perceived to be niche. When 'GamesMaster' started up, it was the only thing of its kind, and it made a big impact. A lot of programmes have been touching things on the periphery, and it's the same with lifestyle magazines – you'll find a few game reviews in there somewhere. It's becoming a bit of a common currency, but no one seems to know how to do it *properly*."

So why has it taken so long for the BBC to offer a show that acknowledges the existence of videogames? And what are the chances of a dedicated program? "I think it's a question of production values," offers Goodchild. "The jury's still out on whether it would make interesting television or not. You only really get that sort of programme on the cable channels – and I think they probably do it out of necessity.

"I THINK IT'S TRUE OF TERRESTRIAL TV IN GENERAL THAT THERE'S A GAP IN THE AUDIENCE THAT ISN'T BEING CATERED FOR – THE YOUNG TEEN AUDIENCE" MALC GOODCHILD, 'SUB ZERO'





'Cybernet' is notable for playing and recording large amounts of its own game footage. But they're obviously not much cop at *Superbike WC* (right)

"Content is always the driver. If you're at the BBC, you've got a wealth of content that you can put into something – like the fact that so many people write to you. I used to work on 'Blue Peter', where people send in huge amounts of ideas for items. If you're a small cable company, you have to go out and find what's popular on the street. I don't necessarily think that leads to good TV, though. And I think games might be too exclusive. There's a feeling like: 'If you're not in, you're very much out'. Traditionally, at the BBC, we've been very much about 'We don't make exclusive TV – we don't alienate people'.

Yoof content

"I think it's true of the Beeb, and with terrestrial TV in general, that there's a gap in the audience that isn't being catered for – the young teen audience. I think that has been acknowledged, and people are trying to address it. It's a genuine area of concern at the BBC – how do we cater for that audience? There used to be programmes along those lines on BBC 2 when Janet Street Porter was around – you know, 'youth' content. If that was still the case, perhaps that's where a games programme would fit in."

Must a show based on videogames be exclusively targeted at younger viewers, though? A fact that has become pre-eminent over recent years is that those who grew up with Spectrums, C64s and even Mega Drives and Super Nintendos are now in their 20s. They're comfortable with, and understand videogames. Could it be argued that the BBC's hierarchy, invariably harking from a different generation, do not?

"I'm not sure that is the case," responds Goodchild. "It's like saying that someone working in Children's BBC who doesn't have kids isn't going to know what children want to watch. I think the problem is more likely to be the size of the organisation. We're fully aware of what we do well. I think that can almost work as a braking mechanism for diverse projects – that we think 'Oh, other people do that. We'll stick to our period dramas and stuff like that.'

Movies, Games & Videos

Produced by Capricorn Programmes' US division, 'Movies, Games & Videos' is shown on most ITV regions on Saturday afternoons. It's not a dedicated videogames programme, but it is an indication of how entertainment software may be covered by the media in future.

Obviously targeted at a predominantly teen audience, 'Movies, Games & Videos' covers selected (often higher profile) games. The material provided for each is not, clearly, the stuff of which informed buying decisions are made of. It's the format of the show, however, that **Edge** finds interesting.

By regarding games as 'equals' to the other forms of media, 'Movies, Games & Videos' acknowledges an important fact – that many teenagers are spending as much on games (if not more) than they are on music or films. This is an important progression. All too often, games coverage within general entertainment programmes is 'isolated' – it's obviously presented as niche material.

It's a shame, then, that the show's content can be patronising beyond belief – its dumbed-down mid-Atlantic-style presenter particularly rankles, while the competitions it runs are offensive in their simplicity.

There's definitely room on network TV for a topical review programme that treats games as just another mainstream comestible. The format can work – as 'Movies, Games & Videos' attests.



'Movies, Games & Videos' is not an entirely games-oriented program. Its approach to games is particularly interesting, though



Capricorn's 'Cybernet' team. The format is pretty budget programming for terrestrial TV at present. But, with a 2:30am broadcast in most areas, plush office space is beyond their resources. Hence the roof

"I wouldn't want commissioners to look bad, though, because they're dealing on all levels. They're dealing with things they don't necessarily have expertise in all the time, and they defer on those. But things on a street level change so quickly. We have to schedule programs well in advance, because when you're making quality programming, you have to do that. So if we have a run-up period [on a games programme] higher than, say, the average magazine, it's going to be out of date when it actually arrives. We used to have a similar problem with fashion. The 'Clothes Show' used to turn things around pretty quickly, but there aren't many shows that can work that closely to broadcasting."

> "WE DON'T HAVE EXACT FIGURES FROM THE BROADCASTER, BUT IT'S AROUND 250,000 VIEWERS PER WEEK, WHICH IS PRETTY GOOD FOR A LATE-NIGHT SLOT" STELLA ATKINS, 'CYBERNET'

So is a reasonably intelligent, appreciably (but not exclusively) 'mature' games programme a wholly unlikely event? Is the videogame industry, despite its burgeoning appeal, aggressive growth and mainstream marketing, genuinely incapable of supporting a high-profile TV show? Many gamers and industry figures would argue not, particularly when you pause to consider the millions of computer and console magazines sold per annum (see DataStream, p130).

"I think you could do a dedicated games programme," Goodchild reckons. "The problem is convincing people that it *should* be done. The magazine industry can't be compared to TV, because it deals with such smaller percentages. There are loads of books out there that tell people how to repair or tune their car. But no one's actually producing a programme that does that on terrestrial TV – it's perceived as being far too niche. But the thing is, you could have said the same about home decorating programs – and look at how big that is now…"



'Bad Influence' was a success story for the 16bit age. At one point it enjoyed six million viewers per show. And yet, it was canned

Net benefits

Capricorn Programmes' 'Cybernet', broadcast on most ITV regions on Thursday nights at around 2:30am, is currently the only 'genuinely' games-oriented programme on terrestrial TV at present (Capricorn is also responsible for 'Movies, Games & Videos', produced by its parent company in the US). Although it features articles concerning the Internet and miscellaneous gadgetry, a large part of its content is dedicated towards software reviews. Its early-morning billing, however, is an obvious impediment to large-scale audiences.

"Obviously, we'd like a better slot for 'Cybernet'," says the show's producer, **Stella Atkins**. "But it's not a bad time for people lounging around after the pub. Besides, young kids can video it. As for viewing figures, we don't do too badly

considering what time it's on. We don't have exact figures from the broadcaster, but it's around 250,000 viewers per week, which is pretty good for a late-night slot. And if video recordings were included in that, I'm sure it would be a lot more."

The show's magazine-like format – no onscreen presenter, with an announcer introducing its content in a relatively informal style – is well-suited to videogame reviews. While a print-based magazine can go into great depth and analyse a game's attributes in detail, 'Cybernet' has the luxury of realtime footage. Lacking a Dominik Diamond or a 'token' female video-jockey consuming precious onscreen seconds, its footage can genuinely illustrate how a game plays.

"Our footage is unique – it's not given to us by a PR company," says Atkins. "Our guys here actually play the games before they review them – which is quite rare for this kind of programme, as a lot of shows and even magazines don't do that. You can tell from the review that it's been played."

In a text-based appraisal of any piece of code, relating concepts such as framerates and how convincingly onscreen objects are animated can prove difficult. 'Cybernet' can show a game exactly as it will appear if played by the viewer. "If a game is jerky," says Atkins, "we'll show it as jerky. We're not going to tart it up in the edit suite. We don't want to give people a false impression of what they're getting. If a game's graphics are a bit dodgy, they're going to be dodgy on the programme, too. If they're superb, they'll look superb. It all depends on what format it's originally on. PC games tend to look far smoother than any others, so they look better on TV. I think the best way to express how a game plays is visually – to actually show it, to find the most entertaining pieces and actually have them there on screen.

"It's very challenging, actually. Most people think a programme like 'Cybernet' would be very easy to make, as it's very visual. But it's tricky coming up with new ways of portraying things. I'm very fortunate in that I have an excellent team, so although I'm not from a games background myself, they know the industry inside out."

THE SKY'S THE LIMIT

Those with the relevant equipment will no doubt be aware that games receive a higher level of coverage on satellite TV. From 'Games World' on Sky One, to 'Game Over' on .tv, the potential of gamers as viewers seems better appreciated by satellite broadcasters.

'Games World' – currently off-air – is Sky's version of Channel 4's 'GamesMaster'. Produced by Hewland International, it also mirrors 'GM's 'challenge' format. Its last series (shown during 1998) perhaps best illustrated the weakness of this tactic. Despite its relatively high production values, it's a lamentable fact that the actual percentage of air time dedicated to game footage was dwarfed by that spent introducing contestants and 'Videators' – billed as 'Games World's version of the Gladiators.'

'Game Over' – currently broadcast four times per week – is a programme entirely based on entertainment software. Its material is similar to that of many print-based magazines. For example, the week starting February 7 included surprisingly up-to-date content: *Incoming* and *Sega Rally 2* (Dreamcast), *Kensei: Sacred Fist* (PlayStation) and *Rakuga Kids* (N64) were examined on a review or preview basis. The show also features a two-part report on the *Tekken 3* world tournament and a retro piece – Professor History taking a look at Sensible Software's *Wizball* for the C64.

It's a shame, then, that .tv is rarely covered in magazine or newspaper TV listings. Taking a glance at *The Independent* and *Guardian* channel guides, it's sad to find that .tv doesn't get a mention. Formerly known as 'The Computer Channel', it was re-launched early last year in its new format. Its three hours per night are filled with technology-related programmes. You can find out more at **www.tvchannel.co.uk**.

A similar (although 24-hour) channel is available in Finland. Moon TV, as it is called, also features alternative music programs, but its dedicated PlayStation, Nintendo 64 and PC shows are worthy of note. Its PlayStation show, 'PlayStation Peliluola' (see p59), takes the form of games footage with an announcer providing information. Although low-budget (and having an annoying tendency to show entire FMV sequences), it's very much the sort of programme many UK-based hardcore gamers will relish. The one thing a broadcast can offer that a magazine cannot is a clear, visual indication of how a game plays. 'Playstation Peliluola' does just that.

In the not-too-distant future, it's possible – indeed, likely – that games and TV will be less divorced. Launched by cable operating group NTL, and billed as 'the first interactive games service', the provisionally titled 'Games Channel' is due to go on-air in the UK this September. Joining other sections of NTL Interactive launching this March (including sports, travel and shopping facilities), the 'Games Channel' will be using software developed by Infogrames.

This channel will allow people with set-top boxes to download and play simplistic, accessible mini-games. These will be a far cry from *V-Rally* or *Outcast* but, tellingly, they don't purport to offer a similar experience. Rather than aiming for the hardcore gamer, the 'Games Channel' largely targets people who wouldn't buy a games console or a PC. 'Participative television' is the term that Infogrames is using.



'Games World' was, essentially, a 'GamesMaster' for Sky One. Its flaws, therefore, were similar

Infogrames is also talking about the possibility of multiplayer games for users with modems installed. Having installed the software, players could send scores back to a main computer, where winners would be calculated. Again, it's a service designed to seduce, say, the housewife rather than the *Half-Life* player. Its potential with time and better technology, however, could be huge. Why just watch a 'GamesMaster'-style programme when you could actually join in?

> "IF A GAME IS JERKY, WE'LL SHOW IT AS JERKY. WE'RE NOT GOING TO TART IT UP IN THE EDIT SUITE. WE DON'T WANT TO GIVE PEOPLE A FALSE IMPRESSION" STELLA ATKINS, 'CYBERNET'





Although far from a mandatory blueprint for videogame-based shows, 'GamesMaster' has come – in some quarters – to be regarded as such

One such individual is **Richard Page**, a researcher for 'Cybernet'. And it's immediately apparent that he views the lack of gaming content on TV from a gamer's perspective. "It's just not viewed as being popular enough," Page laments. "For an industry that probably makes more than the music and film markets, it's amazingly under-represented on TV. But that's probably because it does have this 'GamesMaster' image – that it's very much a kids' thing – big-breasted women running around, big guns, etc – and we're not really about that. We're interested in how a game plays, and new developments in technology. We want to show what's good and what's not, rather than cheapening it

"IT'S JUST NOT VIEWED AS BEING POPULAR ENOUGH. FOR AN INDUSTRY THAT PROBABLY MAKES MORE THAN THE MUSIC AND FILM MARKETS, IT'S AMAZINGLY UNDER-REPRESENTED ON TV" RICHARD PAGE, 'CYBERNET'

with sensationalism – and that's what the terrestrial channels seem to think everybody wants. It's not."

According to Page, the games industry has responded well to 'Cybernet'. "Magazines do tend to get everything first, though," he concedes. "Companies know what they're getting with a magazine; they know their readership, how many people are going to be reading it. But as we're the only terrestrial games programme, we do get everything eventually, and we do get the odd exclusive, too. There are things that magazines do that we can't, though. I saw your *Gran Turismo 2* piece [**E**68]. You could go all the way to Japan and do that, but if we wanted to go over and do something with a film crew, it's ten times more expensive."





Trial and error

It's very easy to damn terrestrial broadcasters for their reluctance to commission and schedule videogame programmes for a reasonable hour. But, in reality, the issue is a mite more complicated than it may first appear.

Perhaps the biggest problem is that games aren't really designed as spectator events. Many can feature moments that are eminently watchable to a gamer, but for the casual viewer, clipping and poor draw distances could be a real turn-off. And do games really look good enough to make entertaining TV? Unlike footage from movies – made specifically as a vicarious experience – software is designed with participation in mind.

"We all like playing games: that's the fun of them, to actually sit and play them," says Malc Goodchild. "I don't think you get very much out of actually sitting and watching people play. If that *is* the case, it's going to be hard to convince people that don't play games that it is worth watching.

"As unscientific as it is, some of our researchers have been going to arcades and observing how people watch games being played. The ones that tend to gather crowds appear to be the machines where you have to be quite physical. Console games are different – they're all about finger movement. There's this one arcade machine, though – I forget its name – but it's a white-water rapids game [Namco's *Rapid River*]. That's actually very physical. You get two people sitting in to play, they have to work together, and you can see them getting out of breath. It's interesting television, because you're watching them making the effort – far more so than observing someone with a joypad and a quick thumb."





Dance Dance Revolution **(above) and *Get Bass* (top) are two such games that can appeal to a wider audience. The greater physical involvement, in the opinion of 'Sub Zero' producer Malc Goodchild, also makes better TV**

Another, arguably, more serious topic is the violent content of many games. It's sometimes easy to forget just how a broadcaster would perceive, for example, some of *Half-Life*'s more visceral excesses.

"We can't show the more gory stuff, and we can't show sexual stuff," says Page ('Cybernet'). "Games like *Phantasmagoria* and *Lulu*, we can't touch that kind of thing. I mean, we wouldn't want to, because they're not that good." This is, on the surface, a surprising admission. Surely 'Cybernet', a programme invariably scheduled for around 2:30am, is relatively safe from the censor's knife? "We can't portray violence – and many games *are* violent – because we have to abide by ITV's rules," explains Atkins. "'Cybernet' does actually go out in one area on a Saturday lunchtime, and of course there are loads of kids who tape it."

"We have very tight restrictions," adds Page, "and it's always a bugbear for us, but we understand that we've got to appeal to as many people as possible. That's actually one of the reasons we're on TV – that we don't say 'This is our target audience.' We're not just after males

from age 11 to 18 – we want to offer something for everyone. This is why you could find an episode where, say, we've *got Half-Life* in the first section and origami on the Internet in the second."

This has always been the difference between TV and print-based media. Despite criticism from liberal quarters, hardline right-wingers have long argued that TV – as the most visual form of commercial, mainstream expression – will have a more profound effect on viewers than written literature or static pictures. It's a point open to strenuous debate, of course – and one **Edge** will return to, in part, for a future article – but it's a seriously thorny issue for videogames.

Games magazines journos have long, and almost without exception, prepared screen grabs of software with apparent impunity. Indeed, the general rule of thumb with pictures in mainstream gaming publications is 'the gorier the better'. Even WH Smiths – once maligned as a self-appointed guardian of good taste, but now rather more moderate in its attitude towards risqué content and its place on store shelves – rarely, if ever, complains. Thus, a magazine aimed at a 'young' audience can feature shots of *Resident Evil 2*'s most gruesome set-pieces, and almost no one bats an eyelid. This just can't happen with TV. Alfred Hitchcock once commented that, "Television has brought murder back into the home – where it belongs." Magazines, however, have the better pictures.



Dominik Diamond's occasionally juvenile humour was forgivable, but the use of scantly-clad females epitomised the 'GamesMaster' attitude to gamers

> "WE CAN'T SHOW THE MORE GORY STUFF, AND WE CAN'T SHOW SEXUAL STUFF. GAMES LIKE PHANTASMAGORIA AND LULU WE CAN'T TOUCH THAT KIND OF THING" RICHARD PAGE, 'CYBERNET'

Playing by the rules

"Children's BBC is still regarded by many parents as a 'safe haven' for their kids," asserts Goodchild. "And whether you believe or disbelieve the theory that violent games lead to violence, I have to take into consideration the opinions of parents who have kids watching our output.

"The BBC is just coming to terms with the idea that on the one hand, we're a public service broadcaster. And, you know, the games market would be a very good audience to be servicing. But on the other hand, we also have to compete in getting bums on seats. So if we're going to do a games programme, we have to consider a lot of issues – where do we put it, when do we screen it... If we put it out at childrens' viewing hours, we immediately rule out huge amounts of products – many games just won't be suitable for their audience. So – out go the shoot 'em ups and beat 'em ups.

Adult Entertainment

As **Edge** prepared this feature for publication, news arrived that Channel 4 is to consider the merits of producing an 'adult-oriented' games programme. 'Bits', as it is called at present, is a new proposal from Ideal World Productions due for submission to Channel 4's commissioners on March 10 – after **Edge**'s print deadline – and could well be the first show to provide televisual videogame coverage for a more mature audience.

Producer with 'Bits', **Aldo Palumbo** is an individual who genuinely plays and appreciates games, which certainly bodes well. He's also strident in his belief that a market exists for an entertaining gaming-based TV show. "We believe that a) the Amiga generation has grown up, b) Sony has created a new world of 18-35 year-old gamers, and c) gaming has become one of the things you do of a weekend along with pubbing, clubbing and a bit of the other," he says. "A weekend is not complete without a bit of all these things. It's no longer geeky or uncool to game a little or even a lot."

"It's all just part of a wider cultural phenomenon," he elaborates. "TV is very good at sucking all the zeitgeist up and spitting it back out in a smart, intensified and nicely packaged form. But it's not like we're out to write the thesis on gaming: there will be nothing 'documentary' about 'Bits'. It's a lifestyle show. It's just a bunch of glam 20-somethings reviewing the latest game releases. They're people we'd like to know. So even if you don't have a console or a computer, you won't be put off from watching the show."



A gaming spin-off of Channel 4's 'Vids' (left), and awaiting approval from C4 commissioners, 'Bits' will be more adult oriented and aims to be broadcast "well after the watershed"

But how will Palumbo and team make game footage 'interesting' to viewers tuned in at its mooted airing of 'well after the watershed'?

"Watching other people play games gets boring very quickly. The last thing we want to do is bore people. The series is not yet commissioned so we don't have an exact slot, but if you imagine that we might come on after 'The Ru Paul' show, then that's a pretty hard act to follow. You can hardly slam in a shed load of gameplay. Part of the answer we can reveal is that the general pace of the show is fast. As for gaming, the presenters themselves are not just quick-witted and glamorous – they are also total gamers, each with a specialism in PlayStation, N64, Mac and PC. (Dreamcast they're already fighting over.) We didn't just ring up a load of people we knew: we trawled the industry to find them."

Will 'Bits' be free of the censorship that so blights other videogames programmes? "We don't foresee any problems," says Palumbo. "At 8pm you – quite rightly – have a lot of family issues to consider. After midnight, it's a different matter. A certain audience delights in being offended a little. *Grand Theft Auto* is a totally sociopathic game. But it *is* just a game. After midnight, when you're far from children, then you can afford to be simplistic and say 'it's just a game'. We also do a post-midnight show called 'Vids', which is risqué to say the least. Put that out at 8pm and C4's phone line would frazzle. But after ten shows only one person has called us to complain. It's not true to say, however, that there are absolutely no rules at all. But it is easier. And – if we're ever in doubt – C4's lawyers are just a phone call away."

But what does Palumbo think of the existing games-based programmes?

"They're aimed at a younger audience," he offers tacitly.

'Bits' will be submitted to C4 for approval during March. All being well, an announcement will be made later in the month. ***Edge*** *will keep readers abreast of further developments.*

"Violent games are a real issue for us. One of our sister productions in this department is the digital BBC Choice. I think it actually had one of the *Carmageddon* programmers on the show. I'm thinking, is this the kind of thing we want to be putting out for six and seven year-olds? So do you put a games programme out later? Can you convince the commissioners that a show that goes out in the evening and competes with a DIY programme is going to get a higher audience figure? Probably not.

"This is why the cable channels can do games programmes. They tend to work in the same kind of areas as magazines – it *is* about niche markets, niche audiences. This is perhaps why channels are falling into categories, like 'Men and Motors.' They've come to the conclusion that if you can claim a very high percentage of a niche market, you're actually doing pretty well. It's also cheaper for them to produce these programmes."

Cost, too, is another influential factor for those proposing games shows. "I would say that you could make a very good games magazine programme," comments Goodchild, "but you'd have to throw a lot of money at it. You'd have to have very good editors working on it to make it work, the directors to make it flow properly and up-to-date music to help make it the full package. You'd want to go



'PlayStation Peliluola' represents the low-budget end of games TV. Its strength, perhaps, is that it discards presentational niceties in favour of greater lengths of games footage. It should tone down use of FMV, though





Stuck for words

Finally, can you think of a way to pen snappy, two-to-three minute reviews without continually using the word 'gameplay'? As Peter Molyneux commented in the The Land That Time Forgot feature (**E**67), there just isn't the language to express 'gameplay' as a

believe the market can support a high-profile, and possibly even 'adult', games show. Conversely, the decision-makers are unconvinced that the industry lacks the mainstream clout as yet. With statistics you could support either viewpoint.

The television industry can be just as guilty of incompetence as any other sector

"THIS IS WHY THE CABLE CHANNELS CAN DO GAMES PROGRAMMES. THEY TEND TO WORK IN THE SAME KIND OF AREAS AS MAGAZINES – IT IS ABOUT NICHE MARKETS AND NICHE AUDIENCES" MALC GOODCHILD, 'SUB ZERO'

to LA, Japan and other places to do pieces on forthcoming games, to do all the things that magazines do. It's not just about getting copy. You actually have to go out there and think: what do people want to see? If it's just talking heads, it's going to be boring. At that point, you start needing a *lot* of money. And you have to justify the expenditure with hard proof that the audience is out there."

concept. Magazines have the luxury of 300-to-4,000 word reviews in which to convey the message by convoluted means. A TV show does not. Simple as it may seem, it's a genuine dilemma.

Speaking to the few people in terrestrial TV working on games programmes, it's obvious that opinions are polarised. On one hand, those who play or make a living from videogames

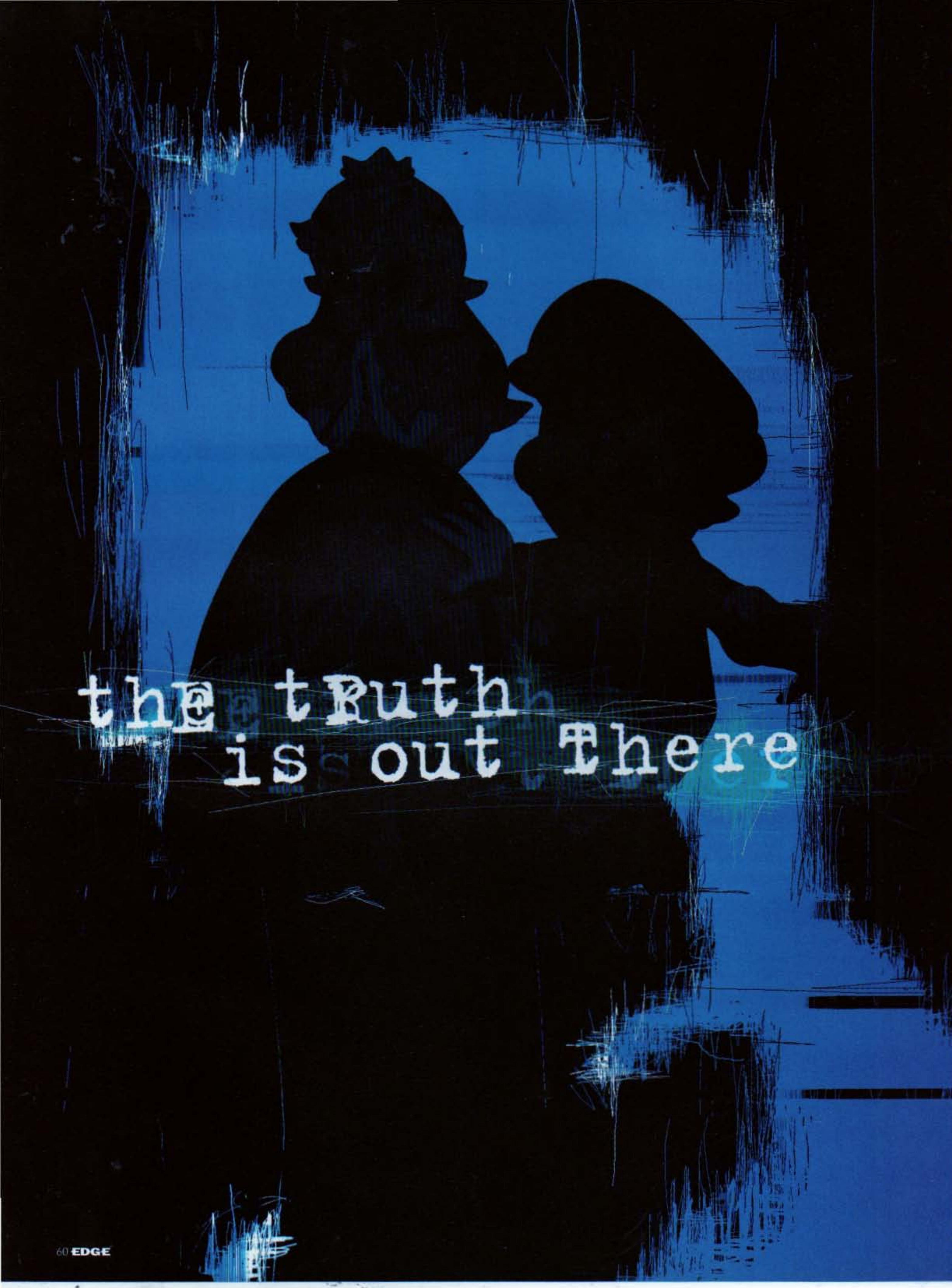




Videogame violence on television is a contentious issue. *Carmaggedon 2* (left) is a mite hardcore, but Eidos' *Thief* (right) is considered risqué, too

of commerce. Take, for instance, the recent competition between Channel 4 and BBC 2 in their respective programming for Friday nights. Both have offered 'alternative' comedy shows, so beloved of students and other such 20-somethings, on the night that a large portion of their potential audience are in pubs and clubs.

It's another shortcoming of TV executives, however, that could one day lead to the proliferation of games-based coverage. As low-budget 'docu-soaps', home DIY programmes and chat shows have demonstrated, the commissioning editor's rallying cry of 'me too!' can be the making of any genre. It's difficult to say that the games industry could support a tailor-made, 'mainstream' show on every terrestrial station. To be honest, it almost certainly couldn't. But just the one would be better than nothing for now.



the truth is out there

Videogames are constantly subject to territorial safeguarding, but thanks to emulation and the advent of the Internet, a world of previously unavailable titles is just waiting to be discovered

If you want a picture of Sega, Nintendo and Sony's ideal future, imagine a Customs officer's jackboot stamping on a grey importer's face forever. Even as the rest of the world rushes towards a true global market, videogame publishers are investing more and more effort into enforcing territorial protection of software in an attempt to stop anyone from ever playing a game which wasn't actually produced within their own country's borders. Which seems puzzling at first, until you examine the world videogame market a little more closely, and notice that, just like in real life, there's a videogames Third World as well. While Japan (for the purposes of this analogy, the First World) leads the way in technological advancement and the west (the Second World) lags a year or so behind, there's a huge chunk of the world that's still playing with the SNES, Mega Drive, NES and even the Commodore 64 and Sinclair Spectrum. In Eastern Europe and, to a lesser extent, South America, the PlayStation, Saturn and N64 are still literally the next generation, and hence there's still money to be made out of what are regarded as dead formats.

Rare delights

'So what has this to do with me, or a forward-looking publication like **Edge**, come to that?', you might well be asking at this point. And the answer is, 'very little'. However, tight territorial control of software is one of the primary factors which has brought about the appearance of a relatively new phenomenon in the world of games – a rarity market.

It's not at all uncommon to see games these days being released in 'Special Edition', 'Director's Cut' or 'Collector's' versions (usually nothing more 'special' than an excuse to charge you a tenner for a tacky T-shirt and plastic keyring). Yet paradoxically, few things are less 'collectable' than those released with that specific purpose in mind. As any music, book or comic buff will tell you, the true collectables are the one-offs – the EMI version of the Sex Pistols' 'God Save The Queen', the Beach Boys' never-released 'Smile' album, the first print run of 'Watchmen' or even the few copies of '80s videogames magazine *Zzap!* which went out to subscribers featuring a venomous satire of a rival magazine, before the rival got wind of it and had the magazine injuncted, withdrawn from sale and republished with the offending pages crudely torn out.

The nature of the videogames market has meant that true collectables like these are fewer than in other areas of culture. Because if a game doesn't make it onto cartridge or CD, or is only released in small numbers in a foreign country with a territorial protection chip, ordinary gamers have no way of playing it. Until now.

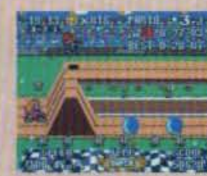
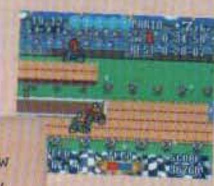
Raw code

With the advent of emulation, suddenly the entire global history of videogames is available to anyone who wants it. Rather than being tied up in the physical medium, games have been once more reduced to their most basic component – raw computer code. Now that anyone can have the equivalent of tens of thousands of pounds' worth of development kit for the price of a download, even fragments of game code that have been abandoned and hidden away in developers' cupboards for years can come to life, providing a unique glimpse into the creation of a game.

Or, if you will, a look into the secret lives of all popular game characters. Over the next four pages **Edge** examines the games nobody wanted you to play, but which are now standing blinking in the sunlight and waiting to show you what (if anything) you were missing all these years. Clearly, the games are technically still protected by copyright (mostly), so **Edge** can't tell you precisely where to find them. But they're all out there. If you want to be an archaeologist, sometimes you have to do a little digging…

MARIO BIKE
(SNES)

No one from Nintendo would confirm or deny the pedigree of this extremely professional-looking hybrid of *Super Mario Kart* and vintage NES title *Excitebike*, so **Edge** is unable to definitively state whether this is a genuine lost Nintendo classic or simply an extremely impressive piece of homegrown hack work. The game's unfinished state (you have to sit and watch title screens and demo modes for almost five minutes before you can actually play) seems to suggest the former, as does the high quality of the graphics and sound. And when you finally get to it, the gameplay lives up to the bloodline - silky smooth and well-balanced, with many features lifted straight out of *SMK*. As Nintendo diversifies the Mario brand out into fighting games, party board games and such like, it may well be that this represents a first abortive step away from the platform formula, but whether it's the spiritual forebear of *Smash Brothers* and *Mario Party* or not, it's a fine little curiosity, and one which you'd have been highly unlikely ever to get a glimpse of without the miracle of emulation.




SONIC THE HEDGEHOG 4
(Mega Drive)

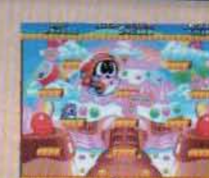
The elastic band has (unsurprisingly) made few significant appearances in videogames. Of the few that spring to mind, only the old Atari *Asteroids*-derivative coin-op *Space Duel*, Denton Designs' future-sports game *Bounces* on the Spectrum, and the odd Amiga/ST puzzle game of Newtonian physics, *E-Motion*, are notable. So it was a bit of a revelation to discover that the planned fourth game in Sega's flagship *Sonic* series was intended to feature the player controlling both Sonic and his pal Tails simultaneously, the two characters being connected with the traditional paper-binding stationery item. *Sonic 4* (which exists as a very early leaked alpha version playable on all the major Mega Drive emulators) is otherwise a pretty traditional *Sonic* game of high-speed platforming, but the elastic factor renders it extraordinarily chaotic and confusing, with the characters hurtling and ricocheting around the screen like rubber nunchaku attached to the end of a yo-yo wielded by a blind-drunk Jackie Chan during an epileptic fit. Presumably, Sega realised that this would baffle the living heck out of your average *Sonic* fan, and abandoned the project in order to concentrate on making a really big mess of the imminent Saturn launch.





BUBBLE BOBBLE 2
(PlayStation, Saturn)

The *Bubble Bobble* series is an incredibly tangled mess of titles - at least three entirely different games have borne the name 'Bubble Bobble 2', including *Rainbow Islands* and a curious Game Boy effort with the gameplay of *Bubble Bobble*, but set on the graphics and screen layouts of *Parasol Stars*. This *Bubble Bobble 2* is in fact a conversion of a 1994 coin-op which was also known as *Bubble Symphony*, and which plays very similarly to the original *Bubble Bobble*, with the addition of power-ups, alternative routes and jazzed-up graphics. The Saturn version was released in Japan (under the *Symphony* title), but the PlayStation version - slated for release by Virgin - got caught up in a series of legal quibbles over who actually owned the rights, and the title was canned at a 98 per cent-complete stage of development. However, the last beta (which was actually reviewed by some mags) leaked out, and thanks to its relatively small size (50Mb) was spread around on the 'warez' underground, from where it can be played on the new PS emus. (It's a weak PAL conversion, though, and the real thing can now be played through the coin-op emu *Raine* anyway.)





MORTAL KOMBAT
(Spectrum)

While the pace of technological advancement in the Videogames First and Second Worlds grows faster with every passing year, there are other parts of the planet for which, in videogames terms, it's still 1985. One such area is Russia, where a rebadged version of the 17 year-old ZX Spectrum is still a popular games platform. The astonishingly faithful Spectrum version of 16bit classic *Prince Of Persia* originated here, and the latest unlikely candidate for the colour-clash treatment is Midway's blood-soaked coin-op. The project isn't quite complete, but the beta version available from the many popular Speccy Websites showcases an implausibly impressive rendition of the arcade original, with all the characters and moves intact. An added bonus is that, unlike the console games featured here, you can play *MK* on your real Speccy without any additional hardware - simply dump the file out through your PC's soundcard on to audio tape, and it'll load up just like a normal game.



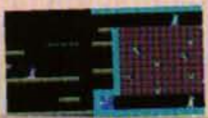


MANIC MINER
(Nintendo 64)

Pretty much since the very day the N64 was released, it's been accompanied by a series of legally dodgy devices like the Doctor V64, which enables games to be loaded onto the console via a CD or a PC's hard drive. While in many people's eyes such devices exist mainly – if not solely – for the purposes of software piracy, they can in fact also be used as a cheap development kit (a couple of hundred quid as opposed to the several thousand the real thing would set you back – even if Nintendo was prepared to sell you one, which it almost certainly wouldn't be). Indeed, as the industry constantly frets over where the next generation of programmers is going to come from in the face of the lack of affordable home coding platforms like the Spectrum and Amiga, these devices provide one of the few viable entry points into console game writing. (N64 emulators still use too many tricks and workarounds to get games running for them to be of much use as a reliable development tool.) N64 *Manic Miner* came to life in just that way. It is in fact a port of a 'modernised' PC version of the game (there's a whole sub-culture of coders respraying old Speccy games in this way, but that's another story altogether), with more colourful graphics and much-improved music, but the gameplay and patterns are identical to the original down to the last pixel. And if you don't get a certain perverse thrill out of playing a pixel-perfect rendition of *Manic Miner* on an N64, **Edge** suspects you're a bit weird.







F-ZERO 2
(SNES)

Ever since the days of the NES, Nintendo systems in particular have been victim to enterprising hackers breaking into cartridge games (using the era's equivalent of the Doctor V64) and producing their own versions of popular titles. Usually, this meant nothing more involved than fiddling around with graphics to give Mario a big afro or turn him into a busty naked woman, but occasionally the hackers would go so far as to create a whole new series of levels for the game. *F-Zero 2* (as far as **Edge** is able to ascertain) is an example of this comparatively rare phenomenon, being effectively a data disk of new tracks (and some new background graphics) for the legendary racer. The drawback, of course, was that the new tracks were accessible only to the tiny proportion of people who owned the copying devices used to create the hack in the first place. It's tempting to believe, though, that this is exactly the kind of thing Nintendo had in mind when it conceived the ill-fated 64DD, a peripheral that would theoretically have opened up such creative opportunities to every N64 owner. At least it might have stopped them buying copying machines, anyway...



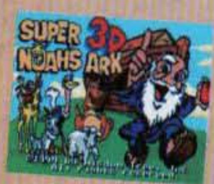








SUPER 3D NOAH'S ARK
(SNES)







Religious videogaming was a genre that never really caught on, but that certainly wasn't the fault of games like *Super 3D Noah's Ark*. Using what looks very much like the *Wolfenstein 3D* engine, *SNA3D* sees you trying to ensure the Creationist safety of the world's animals by pacifying them with food (fired from a catapult, slightly ill-manneredly) until they fall into a peaceful and contented snooze. (Aw.) Oddly, this particular ark seems to have considerably more than two of everything, so you have to peg it around the beautifully realised wooden boat sending the furry critters off to Dreamland before, presumably, picking out the best breeding pair and heaving the rest overboard while they innocently slumber. (This crucial element of the Biblical procedure being oddly glossed over.) *Super 3D Noah's Ark* is the kind of game that you'd never see get a release in Britain if you lived to be 250, but can now play regardless thanks to the efforts of emulator coders. Truly, God really does work in extraordinarily mysterious ways.

VIRTUA FIGHTER 2
(Mega Drive)







Apart from the *Mega Man* titles, this is the only game here to have actually seen the inside of a shop anywhere in the world. The Mega Drive might have dropped down dead in Europe in 1994, but the huge installed user bases kept its life-support machine switched on overseas as late as 1996, when Sega had a bash at cashing in on the massive success of *Virtua Fighter* with this 2D incarnation of the sequel. Unlike the Game Gear version, which was related to *VF* in name only, it's a surprisingly effective translation of the real thing (which, after all, actually plays in 2D anyway), with almost all the characters, moves and locations intact. The problem, in as much as there is one, is that delivering *Virtua Fighter* in 2D tends to rather expose its weaknesses as a beat 'em up when competing with conventional 2D fighters such as *Street Fighter II* in their own territory. Still, this is an impressive piece of work in anyone's book, and it sold so few copies that your chances of ever coming across a 'real' one are tiny, so emulate away.

MEGA MAN 7, 8, 9, X2

(SNES)






The *Mega Man* (aka *Rockman*) series is huge everywhere else in the world, but the European market has never really taken to the little blue chap's platform adventures. Capcom has recently launched a major *Mega Man* offensive, with a significant clutch of games for the PlayStation (a 2D platformer, a 3D semi-RPG, and even a *Mario Kart* wannabe), but traditionalists will be entranced by these old-style SNES games, peaking with *Mega Man 9* which was released (in Japan only) as recently as last year. To be honest, all the games are pretty much the same (and for that matter, essentially the same as the original *Mega Man* titles on the NES, or any of the several Game Boy titles which made it out in Europe) – simplistic but unusually tricky platforms-and-shooting efforts featuring the variably talented cohorts of the evil Dr Wily and their robot minions – but Capcom has refined the style to perfection over the 12-year course of the series, and there are people who would argue that *Mega Man 9* represents the evolutionary pinnacle of the old-fashioned classic 2D platform game. Completely wrong people, mind you, but people nonetheless.

KART FIGHTERS

(NES)

Contrary to popular belief, *Smash Brothers isn't* actually the first fighting game to star a classic stable of Nintendo game characters. *Kart Fighters* collected – as you might expect – the racers from *Super Mario Kart* and put them in a NES beat 'em up styled after *Street Fighter II*, complete with dragon punches, fireball attacks and all the time-honoured *SFII* moves. Never released on a cartridge, an air of mystery surrounds *Kart Fighters*. Suspiciously high quality for a home-made hack game, well-placed rumours persist that *KF* was originally intended as an official Nintendo release which would serve as a farewell to the NES market, until the company's bosses decided that they'd rather not see family-orientated characters like Mario and Luigi punching each other's lights out and pulled the project at the last minute. Whether or not any of this is true (and once again, no one at the Big N would neither confirm nor deny the tale), you can now knock seven bells out of the little fellow any time you like armed with nothing more offensive than an NES emulator.



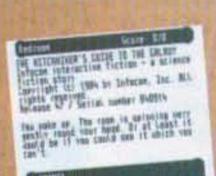




THE INFOCOM COLLECTION

(Game Boy)

The classic series of text adventures including *Zork*, *The Hitch-Hiker's Guide To The Galaxy* and *Planetfall*, which dates all the way back to the Apple II in 1980, is now public-domain material, which has resulted in people inflicting all manner of strange indignities on it. Strangest of all, though, is this series of Game Boy ports. Text input is achieved by the astoundingly laborious construction of words and phrases letter-by-letter using the D-pad (leading to some quite stratospheric displays of 'parser rage' when the game insists on you typing out an entire sentence like 'UNLOCK THE DOOR WITH THE SQUARE KEY AND OPEN IT AND GO NORTH'), and while the Game Boy at least remembers previously typed instructions so you can scroll back through the list every time you want to repeat something you've already done, you still have to wonder in awe and fear at the obvious gibbering insanity that drove some wild-eyed nutter to convert an entire series of text adventures to a handheld games console.

FASTER, HARDER, MORE CHALLENGING Q*BERT

(Arcade)





One of a highly exclusive club of coin-ops which never made it into arcades (other members include *Joust 2* – now playable as part of GT's *Arcade's Greatest Hits* series – and the near-mythical *Marble Madness 2*, of which only two prototypes are said to exist anywhere in the world), *FHMC Q*Bert* was a follow-up to the hugely popular original starring the foul-mouthed, big-nosed pyramid painter, featuring gameplay more or less identical to the first game only Faster, Harder and More Challenging. Obviously, *Q*Bert*'s 15 minutes expired before the coin-op could make it into arcades, though, and it remained locked away in the vaults of videogame legend until the advent of MAME, whereupon original author Warren Davis released the game's code into the public domain with his blessing. Emulation fans the world over marvelled at the strikingly literal title, the almost totally unchanged gameplay and graphics and the extraordinarily brutal difficulty level, and moved swiftly on. (For the full unexpurgated version of the *FHMC Q*Bert* story, visit the author's Website at **http://www.coinop.org/features/qbstory.html**)

TETRIS
(NES)







The various legal shenanigans surrounding *Tetris* are well-documented, and look set to get even more convoluted with The Tetris Company's recent announcement that it intends to crack down on the thousands of unofficial public domain and shareware versions of the game which have been created by amateur programmers since the legendary puzzle game's debut. The most celebrated case, though, was the one which saw Atari offshoot Tengen forced to withdraw and destroy the entire stock of its excellent NES version of the game, in favour of Nintendo's own inferior realisation. (Which, in fairness, at least had a less bizarre control system, Tengen having inexplicably opted to rotate blocks with Up and Down on the D-pad and drop them to the bottom with the fire button, presumably making the decision during a design meeting somewhere in Amsterdam.) Now, however, you can play Tengen *Tetris* and thumb your nose fearlessly at the bloodsucking parasites that pass as corporate lawyers in the privacy of your own home, and no one will ever know.

RES-Q
(Mega Drive)

The only genuine British rarity here, *Res-Q* was a Mega Drive game from Psygnosis which was overtaken by developments in the MD scene (or rather, the total lack of them, as the platform's economic viability collapsed almost overnight thanks to the advent of the PlayStation) before it got as far as any shop shelves. Allegedly a little disgruntled at all their hard work being wasted, programmers at Tempest Software released the code to the emulation community with their blessing. It's not difficult to understand Psygnosis' thinking – while well executed, the game is a fairly ponderous underground-exploring mission that really belongs on an Amiga or Atari ST, and its chances of being a hit with the Mega Drive audience would have to be counted as very slim indeed. Such is the problem of producing cartridge games, it's too expensive just to throw something out and see how it does, even if you've just spent 18 months and a couple of hundred thousand quid developing it, just in time to see the console go down the toilet. Suddenly, 100 million potential Russian Spectrum owners seem like an attractive market...







DUKE NUKEM 3D
(Mega Drive)







In the dying days of the 16bit consoles, the firstperson shooter was something of a Holy Grail for developers. The SNES actually managed a fairly respectable last hurrah for its dedicated fans, with first a port of id's groundbreaking, genre-spawning *Wolfenstein 3D*, and then an impressively faithful, Super-FX-assisted conversion of the mighty *Doom*. Mega Drive owners weren't so lucky, with nothing much more impressive than Accolade's fun but technically primitive *Zero Tolerance* to carry the flag for them (not that you'd have been able to see much of the flag through the tiny letterboxed screen barely a quarter of the screen in height). It comes as quite a shock, then, to see how different things *might* have been, in the shape of *Duke Nukem 3D*. Related only passingly to the PC original, Mega Drive *Duke* is nevertheless a technical *tour de force*, shifting a glorious full-screen display around at lightning speed. (In fact, it's *so* fast that it renders the game astonishingly tough at even the easiest difficulty setting.) The only compromise comes in the form of the fairly heavy graphical distortion of enemies when you get close to them, but it isn't bad enough to render them unrecognisable, and much of the distinctive *Duke* atmosphere survives. Looking at this, it's difficult to believe that the old MD wouldn't have been capable of a pretty decent stab at *Doom*, if it had only lived long enough to find out.

THE FUTURE UNEXPLAINED

There are currently two major 'lost' games out there somewhere in the games industry. Controversial beat 'em up *Thrill Kill* has been bizarrely suppressed by new owner Electronic Arts – not only has it decided not to publish the game itself, but the giant company has also announced that it won't be selling the game to anyone else, effectively electing itself the moral guardian of the entire gameplaying public. In a similar vein, Sensible Software's *Sex, Drugs and Rock'n'Roll* eventually destroyed the famous developer, being deemed too 'adult' to attract a publisher despite having over four years of work locked up in it. It seems inconceivable that there aren't copies of these titles knocking around somewhere, in an unlocked drawer at a publisher's office or the odd unreturned preview disc at a games mag. Keep watching the skies...

BETTER TRANSLATE THAN NEVER

MORE UNDISCOVERED GEMS FROM THE UNDERGROUND

Where games are concerned, Japan is a land of proverbial plenty. It's the videogames capitol of the world. By contrast, the UK is a medium-sized city – a Sheffield, or a Liverpool. Perhaps understandably, a large number of Japanese games never reach these shores. The reasons behind that fact are many and varied. Typically, it's a simple case of 'It won't sell, so why bother?'

Given the greater mainstream acceptance of gaming in Japan, there are many games that are tailored specifically for the tastes of their home market. While the dating simulation may one day reach western shores, no publisher would dream of translating existing examples of the genre for release in the UK. Similarly, horse racing games, 'nurturing' titles and a wealth of hardcore RPGs are viewed as 'too Japanese' for the simple western palate.





Super Fire Pro Wrestling X Premium, in both genuine and hacked, translated form

Net result

Edge is not suggesting that every game should or could be converted for English-speaking nations. Indeed, to do so would invariably guarantee a loss for the publisher involved. There is, however, a definite (if small) collection of western enthusiasts that would buy such games, and would love to play them in English. And, surprisingly, their prayers are being answered. Groups of über-enthusiasts are actually endeavouring to convert and freely distribute such titles via the Internet.

With the SNES and NES playing host to a huge number of RPGs, it's hardly extraordinary to note that the majority of projects involve those systems. But, regardless of format, converting a text-heavy title to English is a daunting, almost prohibitively time-consuming task.

The first task for a translator is to discover, and note, every piece of text found in a title. This could involve an appreciable degree of legwork in the average RPG, where in-game characters can have a number of pre-set responses. Secondly, this text must be re-written in the appropriate tongue. At this point things become complex...

Japanese text consumes less space than the majority of its verbiage-heavy Western equivalents. To fit in a literal translation of any given piece of copy, a programmer must trawl through a ROM to discover how text is displayed onscreen. If it appears in a window, it may be possible to re-size these to accommodate larger portions of dialogue. But does its code contain an English character set? If so, which registers refer to each digit or figure? Do you need to create a new font especially for the game? To discover such details requires patient, painstaking detective work.

Fantasy fanatics

At **http://www.pic.ab.ca/anime/docs/ff2trans.htm**, one particular coder has published a guide to translating *Final Fantasy II* for different languages. It's a revealing document. The sheer amount of effort involved beggars belief. Given that such conversions are for 'old' games, and that a relatively tiny audience awaits such labours, it's a wonder people even *consider* it as a hobby. But they do.

Perhaps the most celebrated translation is that of *Final Fantasy V*, found at **http://lfx.org/rpge/index2.shtml**. This is the homepage of RPGe, a team that converts Japanese roleplaying games for like-minded individuals. To play the English version of *FFV*, a working emulator and the requisite game ROM are required. You then simply apply a 'patch'. It's a fairly painless procedure.

RPGe also offers localisations of Konami's *Getsufuuma Densetsu*, Tomy's *Gunhazard* and Square's *Hanjuku Heroes* – an almost surreal but certainly 'odd' war







Fans of games such as (from left) *Dragon Quest 5*, *FFV* and *Gunhazard* have invested immense effort into translating text



English-language hacks of *Magic Knight Rayearth* (left) and *Wedding Peach* (centre). A hacked French *Mega Man 7* (right)

simulation with its tongue firmly set in cheek. The team is also translating *Magic Knight Rayearth*, where progress has been aided by a hack that has reduced its font size by half – an important development.

Although many projects are perennial 'works in progress' (or 'regress', in some instances), there are many different conversion works to discover. From Zealsoft Translation Corp's *Dragon Quest 5* translation (**http://www.geocities.com/Area51/Lair/5899/Zeal.Html**), to version 0.6a of *Seiken Densetsu* (**http://www.emudirect.com/translations.html**), most dedicated RPG fans will find something to their liking.

Not every translation project involves a roleplaying game, though. The English version of *Super Fire Pro Wrestling X Premium* (**http://www.fidnet.com/-sydra/sfpwxp.htm**) offers localised text in menus and onscreen displays. The surprisingly anonymous enthusiast behind the work also provides a manual (in English) and a file that unlocks the game's many characters. You have to admire such dedication.

New obscurity

Indeed, it's possible to find wonderfully obscure Japanese titles picked for an English language revision. At **http://www.pic.ab.ca/anime/trans.htm**, you can find *Wedding Peach*, a SNES game based on a popular Japanese anime series. As a first project for Chaotic Transitions, it's a decidedly odd choice. It also offers an insight into the type of game that western console owners simply never get to see. *Wedding Peach* follows three young girls as they vie for the affections of sweetheart Tim. By winning a range of sub-games, each aspires to win a date with the object of their affections. As a game, it's diverting, but you can't fault the efforts of its translators. They even provide a link to a Website for those unfamiliar with its subject matter (**http://www.tcp.com/doi/wpeach/wpeach.html**).

If a 'marginal' game is converted to English for the US market, it's a relatively simple exercise to release it in the UK. But would a publisher consider translating into French, German or Italian? In many instances, the answer is 'no'. Furthermore, there are many small countries across the globe that have no choice but to play English language versions of even fairly high-profile games. It's relatively easy to conquer an action-based game, but what of RPGs or other text-heavy titles?

In Italy, a group has been established to convert English versions into their mother tongue. At their homepage (**http://volftp.tin.it/ludus/iep/sadnes/**) you can find labours of love such as *Chrono Trigger* and *FFIII*. At **http://members.tripod.com/-grics/mm7final.htm**, a group of French enthusiasts have taken the time to produce a French version of *Mega Man 7*. If English gamers ever feel slighted by the unwillingness of certain Japanese companies to translate little known adventures, consider the lot of the average European fan. This is why, perhaps, a large proportion of fan-powered localisation projects are dedicated to European languages.

It's lamentable, then, that finding a copy of the original Japanese version of a game can prove a near impossible task. As America's IDSA is quick to close sites that carry ROM downloads, the majority of sites provide the 'patch', but not the actual game code. Problematically, the ROM sites that appear briefly before an inevitable closure tend to offer mainstream titles only. Should you actually find a copy of a particular game, the legality of downloading it is, as ever, questionable.

Law abiding

To 'legitimately' play a translated, 'hacked' version of a game on an emulator, you need to own the original copy. Finding one, however, could prove tricky. Although dedicated retrogaming stores are now beginning to appear (Games Exchange, for example, offers this service), finding a game like *Wedding Peach* or *Hanjuku Heroes* would be an incredible achievement.

This is the dichotomy that typifies one of the most niche, yet fascinating, areas of the emulation scene. In many instances, it's hard enough to actually get to play a particular translation. To do so with due deference to copyright laws is restrictively difficult. It's yet another tantalising reason why the industry should attempt to formalise emulation, and attempt to address the issues pertaining to it. Otherwise, why will people make the effort to convert such games if the general public have no means of playing them? Rhetorically, they won't. And that would be criminal.

TESTSCREEN

The definitive monthly assessment of the world's latest videogames

Hot shot – part deux

As this section of **Edge** goes to press, Sony's next generation PlayStation 2 announcement has only just been made. Final specs disclosed at the recent press event in Japan present an impressive proposition, one which places Sony's next console convincingly ahead of its rivals, with a polygon processing capacity many times that of Dreamcast's.

But while talk of true photorealistic visuals in realtime at this stage is impetuous at best, the leap in graphical quality over the current PlayStation is immense. And, from Sony's perspective, this couldn't come at a better time: as PC titles are pulling rapidly ahead with the assistance of increasingly powerful 3D accelerators, PlayStation games have long lost the drive to stay in the slipstream. Lower resolution and polygon counts have left Ken Kutaragi's world-embraced grey box looking increasingly inferior to the world-established grey tower. Which, gameplay issues aside, means that these days even the most graphically accomplished PlayStation title looks blocky and primitive in comparison to its PC counterpart.

Yet the introduction of near-photorealism has a potentially far more important consequence. Since the beginning of videogaming, from the crude monochromatic blocks to the texture-mapped silkiness of today's 32bit games, right through the colourful and cartoonesque sprite-based 16bit era, many (usually older) individuals found the unrealistic visuals off-putting. Now, with the next generation PlayStation, Dreamcast and 3D-accelerated PC all pushing the standard of graphical content forward, yesterday's spectators may become tomorrow's gamers. Suddenly, gaming environments look real and the same individuals should find videogaming a far more tempting proposition.

Naturally, increasingly intelligent themes and the arrival of virtual emotion will help, but with the visual barrier taken care of, games instantly become more accessible to a wider audience. Furthermore, moves towards authentic dynamics (whether in racers or firstperson shooters) should further ease their initiation, by increasing the number of parameters that new gamers can relate to. Of course, this shouldn't be taken as an outlawing of titles dealing with abstract concepts, but anything depicting a realistic event should look and feel genuine if it is to convince potential players to join in the fun.

As the world prepares to welcome the 50 millionth PlayStation (see News, p6), Sony's first console has taken remarkable strides in infiltrating the mainstream and making videogaming a massmarket pastime. Now it's time for the next generation to have a go.





The road towards photorealism: a simplistic *Night Driver* (left), *Sega Rally*'s highly colourful Saturn-powered approach (centre), and its impressive 128bit successor, *Sega Rally 2* (right)

Edge evaluates games on a scale of ten, where five naturally represents the middle value. A game receiving a 'seven out of ten', for example, is a competent title with noticeable flaws but which should still appeal to a considerable range of players – naturally more so to those who favour the title's particular genre. It does, after all, score two points above average and should therefore not be considered as such.

Edge's rating system is fair, progressive and balanced. An average game deserves an average mark – not, as many believe, seven out of ten.

Videogames on the Edge

This month's deadline deviants...



Driver (PC/PS) GT Interactive
Having spent an unhealthy amount of time breaking every conceivable driving rule, **Edge** can hardly wait for the review code's arrival next month.



Mario Bike (SNES) No publisher
Coming across a game like *Mario Bike* is like finding a ten-pound note in a pair of trousers you haven't worn for ages: certain to put a smile on anyone's face.



Half-Life (PC) Cendant
Succumbing to that most infamous of games-mag staff habits, the LAN PC game, **Edge** has found the network version of Valve's classic utterly irresistible.



Daytona (Arcade) Sega
A casual wander through the Trocadero was halted by AM2's still-fabulous racer. Sega has already been asked for a 'perfect' Dreamcast conversion.

Index



POWER STONE





Take that and party: the hammer is among the weapons that it's crucial to utilise in order to win. Capcom has reinvented both itself and the beat 'em up









The richly detailed locations in *Power Stone* are matched by the fine music which backs the action. Galuda's theme is among the best tracks

For traditional beat 'em up fans, their first excursion into the world of *Power Stone* may well be a frustrating experience. There will be little doubt this is a magnificent-looking game, but questions will bounce around the room: Where are the 'proper' combos? Why can't you block? It simply won't feel right.

And then it clicks. A subtle mental adjustment is made and Capcom's Power Trip suddenly pulls into sharp focus; this is one of the most exciting games of the year to date. Ever since the paradigm shift to 3D, fighting titles have struggled to cope with the extra plane of movement, with Dream Factory's *Ehrgeiz* (**E**68) furthest to the conceptual fore. *Power Stone*, without a doubt, is one successful solution.

Just as Miyamoto realised that 3D combat in *Zelda: Ocarina of Time* could never work without assistance, Capcom has cast aside complications such as *Virtua Fighter 3tb*'s 'dodge' button. Instead, you concentrate on guiding the character around the tightly designed arenas, most attacks directed more or less automatically in the direction of your opponent. Played with either Dreamcast's analogue stick or digital pad, *Power Stone* is as fluid and controllable as any of its ancestors – if not quite as precise.

The control pad's four buttons and two triggers are all employed to play the game; a key each for jumping, kicking, punching and grabbing, plus punch and jump, and kick and jump, assigned to the triggers. A major part of the aforementioned adjustment needed to enjoy the game is learning to use the grab button. Past beat 'em ups have focused on learning the intricacies of each protagonist's skills. Revelling in the vastly increased number of polygons Dreamcast affords, Capcom has rewritten the genre's rule book: now you must master not the characters, but the environments instead.

Perhaps inspired by the respected *Vampire* series, *Power Stone*'s struggles are played out in a mythical 19th Century world, populated by pirates and warriors. The game's simple (yet credible) plot involves eight characters scouring their world from 'Londo' to 'Tong-An', settings based on authentic locations. In keeping with traditional fighting game themes, you must battle through a series of increasingly skilled opponents, before confronting a sub-boss, boss, and then 'ultra-boss'.

It's impossible to prepare for the interactivity on offer in *Power Stone*'s environments. Boxes, tables, chairs, trees benches and urns can be hurled about, while walls, poles and roofs can be swung or hung from. Remembering not to simply punch and kick is the first lesson to learn. The second is the importance of the 'Power Stones' themselves, essentially a power-up system derived from Capcom's *X-Men* series.

Each character starts with one of three coloured gems each, which can be beaten from their possession by a







Format: **Dreamcast**

Publisher: **Capcom**

Developer: **In-house**

Price: **¥5,800 (£30)**

Release: **Out now (Japan)**

Confronting the final boss is an awesome moment (main), as it launches a series of increasingly massive attacks. The minigun (top) is a fine addition





By completing the game with successive characters, the blank pages of the Power Stone Collection are filled. The splitscreen mode is… odd

reasonably strong attack. Meanwhile, a third stone materialises at a random point in the battleground, triggering a dash to be the first to capture it. Holding all three activates a super-state (not dissimilar to the 'beast' facility in *Bloody Roar* – see p85), with the punch and kick actions metamorphosed into more potent attacks, and the triggers capable of initiating super moves underlined by some showstopping visual effects.

Also teleported into the fray are a selection of weapon chests, containing flamethrowers, missile launchers, pistols and bombs – all wonderfully at odds with the game's setting. By completing the game with successive characters, it's possible to unlock new additions to the arsenal – look out for the minigun, a clone of the lethal weapon from action flick 'Predator'.



Collect all three Power Stones to initiate the advanced 'super-state'

A quick glance at these screenshots should be enough to confirm the graphical mastery resplendent in Capcom's game. Long has it been accepted that the firm's 2D titles have been some of the most beautiful ever seen, but few could

Remembering **not to simply punch and kick** is the first lesson to learn. The second is the **importance of the 'Power Stones'; a power-up system** derived from Capcom's *X-Men* series

have predicted how well those talents have translated into 3D. The level of detail present in *Power Stone* is staggering ('Londo' even features the time-honoured, British-brewed 'Ind Coupe' swinging on a sign outside one of the ale houses), and the characters somehow capture the 2D cartoon spirit so beloved of Capcom but in a style of 3D that looks so solid you can almost touch it.

With a mass of options and secrets to unlock, *Power Stone* has enough to keep the most frenzied gamehead sated. Aside from a normal twoplayer option, a splitscreen mode resides deep within the game, and three VMS mini-games become available. The boss characters eventually become playable, too.

Once the undisputed beat 'em up champion, many wondered why Capcom had largely ignored the 3D fighting scene (efforts such as *Star Gladiators* being rather half-baked). It's been a long time coming, but *Power Stone* marks the company's triumphant return to the head of the pack. **Edge** team members have been slow to install a Dreamcast in their own homes, but this game's arrival has gone some way towards changing that. Massively addictive, cleverly realised and simply beautiful to look at, Capcom's *Power Stone* is truly a jewel in Dreamcast's crown.

Edge rating:

Nine out of ten



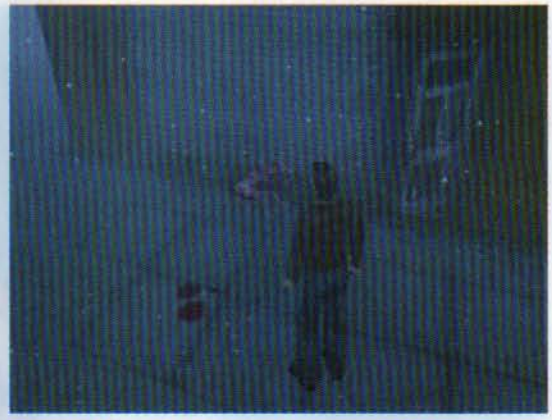


As well as the flamethrowers and missile launchers, a host of new weapons are unleashed upon completing the game

SILENT HILL



As you wander around the town of Silent Hill, you can pick up various maps which will enable you to navigate around the large playing area





Although the monsters aren't very varied, they're all horrible and best dead (top). Some objects are interactive, but most are merely scenery

No 'proper' adventure game can get away with being as confusing as hell – can it? If lucid plotting is the mark of a quality RPG, *Silent Hill*'s designers have shown remarkable singularity of purpose in not bothering with it. But perhaps the immaturity of the horror genre – as well as the paucity of titles exploiting it – has enforced a set of false expectations. It's possible *Silent Hill* could be the future.

Unlike *Resident Evil*, *Silent Hill* is not an action adventure. For want of a better term, it's more psychological; where both *Resident Evils* make the path of their story explicit, *Silent Hill* has a sweaty, unpredictable and nightmarish quality. The game begins with you regaining consciousness after a car accident in which you (hopefully) avoided running someone over. You then discover your daughter left the car while you were out cold. Fair enough, seven-year-olds do that kind of thing. What's less easily explained away is that when you find her she runs away, leaving you to be stabbed by a gang of zombie children who closely resemble the bulbous-eyed grey aliens beloved of 'The X-Files' and its ilk.

From this point on the plot corkscrews into obscurity and confusion, and even when you reach its startling denouement (all too quickly, in **Edge**'s opinion), *Silent Hill* leaves a straggly trail of contradictory information and unanswered questions. By usual benchmarks it's terrible; in the context of reproducing a nightmare, it's nearly brilliant.

Visually, *Silent Hill* is a cut above other *Tomb Raider*-alikes, offering a broad canvas of varied, detailed environments. Where fogging is usually an expedient but intrusive means of hiding any shortcomings in draw distance, the game utilises the effect to heighten tension – the nocturnal scenes in which you travel by torchlight are especially claustrophobic. Conversely, the range of monsters isn't as varied as it could





Each of the characters' facial expressions are impressively rendered. Your delightful daughter (right) is the cause of all your trouble...





Format:	**PlayStation**
Publisher:	**Konami**
Developer:	**KCET**
Price:	**£40**
Release:	**April**









The environment envelops you with heavy fog, snow (top right) and rain. At night-time, your torch's radius offers an even smaller visibility range



One of the main advantages of a fully 3D environment, rather than prerendered backdrops, is the ability to move the camera around it

be – but then players who want to progress for the sake of meeting and splattering a bunch of increasingly nasty monsters are already well served by any number of other titles.

When you encounter other characters, the action halts for an FMV cut-scene, but then follows up with further scenes rendered using the in-game engine – like *Metal Gear Solid*. In keeping with the unsettling atmosphere, these characters undergo strange personality shifts and can help or hinder your progress unpredictably.

Most of the puzzles are logical, although there are many instances in *Silent Hill* where the solutions are not immediately obvious; most result in you working out what you have to do (or, embarrassingly, being told) after a short contemplative wander around. Real stinkers are rare.

Sonically, the game is without equal on the PlayStation. Just as any competent horror film builds tension to a crescendo with eerie incidental music and mysterious 'noises off', *Silent Hill* jangles your nerves with consummate ease. The flapping of wings in the distance that signifies an imminent attack by some hellish bat creature is nothing compared with the demonic drum solo on entering or leaving the school's clock tower for the first time. And even that seems inconsequential in comparison to the relentless overture that accompanies your sprint into downtown Silent Hill.

***Silent Hill* is difficult;** not in the sense of baffling puzzles and undefeatable monsters, **but in clarity of plot.** At once scary, nonsensical, but plausible, **it's a near-perfect sim nightmare**

Masterful touches aside, this isn't a universally appealing game. *Silent Hill* is difficult; not in the sense of tricky puzzles and vicious monsters, but in clarity of plot. At once scary, nonsensical, but plausible, it's a scarily fine sim nightmare.

Edge rating:

Eight out of ten

CASTLEVANIA











Although this 3D version is crucially flawed, *Castlevania* does contain a variety of impressive monsters, as this huge skeleton boss (main) testifies





While combat is made interesting by a variety of imaginative weapons – such as crosses, whips and holy water – it can prove a confusing affair

First seen at April 1997's Tokyo Game Show, much has been promised by *Castlevania*. Not in the least that a true 3D instalment of the series has the potential to show the likes of *Resident Evil* how a putative horror game should really work – indeed, from that premiere, video-only appearance, right up until recent previews, *Castlevania* has certainly shown itself to hold the potential to do just that. And yet, despite a wealth of intriguing and inventive ideas, *Castlevania* has proved itself to be, ultimately, a significantly flawed experience. If these are the first steps of a series reborn, they are disappointingly faltering and unsure.

The greatest of its problems is the game camera. It is to Nintendo's credit that it is still – with the possible exception of Rare – the only company that has a true grasp of virtual 3D space on the N64. Which makes it all the more depressing to see Konami struggling to grasp the mechanics of how a 3D game camera should work. Constantly roving to find a comfortable angle, and then settling in the most unhelpful of places, Konami's effort is consistently frustrating. A *Zelda*-style combat lock-on – via the R button – resets the camera behind the protagonist when not in combat, which goes a little way to amend the problem. During combat, though, this simply allows the character to strike in the direction of the nearest enemy, without moving the camera, often resulting in attacks made to opponents that can't actually be seen until they move within the camera's field of view – which is uncomfortably, and unhealthily, close to the hero. Also, during the numerous platform-style sections of the game, the camera locks into an unmoveable position, at an angle from which judging jumps is ridiculously hard. It's a far from ideal system, and one that Konami appears to be having a lot of trouble with: its other big hope for '99, *Hybrid Heaven*, suffers from a similar problem, although to a lesser extent.

Elsewhere, the game proves to be more enjoyable, although *Castlevania* never quite recovers from the limitations imposed by the camera. Loosely linked to previous instalments – Dracula must once again be destroyed, but this time without the Belmont family – the gloomy, gothic atmosphere is marvellously evoked, and proves to be *Castlevania*'s greatest strength. Graphically, the game is suitably detailed and while fuzzy and undefined in places, the sensation of actually being in a Hammer horror film is palpable. Adding to this cinematic quality are many cut-scenes, which in a style akin





The dual characters' specific secret areas offer extra longevity









Despite its various shortcomings, the game does deliver an evocative and spellbinding atmosphere

Format: **Nintendo 64**

Publisher: **Konami**

Developer: **In-house**

Price: **$45 (£35)**

Release: **Out now (US); April (UK)**







The awkward 3D game camera doesn't help with platform-oriented sections, of which there are many, as pixel-perfect jumping is often required

to *Zelda* and *Lylat Wars*, further the well-scripted plot by using the game engine, and seamlessly move from the in-game action and back again. Used to good shock effect, the pale woman insisting the red roses that she is watering are white, is one example. Realisation that the roses are actually white only comes when it is apparent she's watering the roses with blood. And then there's the panicking villager, who just happens to have no reflection in the mirror behind him. *Castlevania* is packed with such gruesomely enjoyable delights.

While graphically primitive next to *Zelda*, of special importance is the conceptually inspired day-to-night feature. Certain NPCs will only appear at a certain time of day, vampires are less powerful – or even dormant – during daylight, certain secret items and objects can only be found or used at specific times of day, and so on.

The two playable characters – whip-wielding Reinhardt Schneider and magic-using Carrie Eastfield – are more than a cosmetic effect. Each character, with their own unique abilities, has access to levels in the game that can't be reached by the other. This adds an amount of replay value to the game, as the time it takes to reach Dracula from the beginning is disappointingly short – though the time taken to reach the king vampire also has in-game consequences. In an intriguing twist, a fellow vampire-hunter turns up at one point during your quest; if he takes too long to reach his ultimate goal, he too becomes a member of the undead himself, and an extra boss character that must be vanquished.

It's depressing to see Konami **struggling to grasp** the mechanics of how a **3D game camera should work**. *Castlevania* never quite recovers from the **limitations imposed** by the camera

Such touches make it clear that *Castlevania* has been invested with a lot of thought and care. In fact, some of the content and ideas here had the potential to give Konami a classic property. However, without the technical expertise to fully realise its own ambitious concepts, *Castlevania* is something of a shadow of its former self.

Edge rating:

Six out of ten

SILVER







Cultural differences between east and west are plain to see – *Silver* omits the random monsters beloved of the Japanese, but keeps the clichéd plot



Hero David has to hack and slay everything in sight in order to nail the eponymous evil necromancer – and be reunited with his beloved wife





The story, while pacy, is unbending in its linearity. Fortunately this is compensated by the combat system which proves intuitive in its deployment of moves

Dangerous though it is to take on the Japanese at one of their own games, *Silver* skips through *Final Fantasy VII*'s home turf: it's a cute, clichéd and unashamedly whimsical fantasy adventure. However, while it was originally touted as a western riposte to Japanese-style RPGs (as if that's an issue), *Silver* nestles snugly between *Zelda* and Square Soft's influential masterpiece – in ambition, if not in achievement.

As you'd expect in a cartoon RPG, *Silver*'s emphasis is on storytelling rather than statistics, so the mechanics relating to character abilities are kept out of sight, and there are few ways in which to deviate from the preordained route. The carousel of golems and ghouls, sorcerers and brigands may revolve around your young hero, but in many ways the player is just a passenger, breathlessly hanging on to an ever-twisting tale rather than stamping their own mark upon it.

As such, you travel light, through beautifully detailed prerendered backgrounds, using one of the simplest interfaces you'll ever find on the PC. The game is completely mouse-driven, with a click opening up a 'pie' menu from which you can feed, arm and cast spells for your party.

Keyboard shortcuts to the sub-menus would have been handy, regardless of the inevitable Dreamcast port, but the system is joyously intuitive all the same. It makes playing a breeze – which is vital, as pacy progress is everything in *Silver*. You quickly settle into a pattern of tapping a screen for anything of potential interest and then moving on, ever eager to divine what happens next.

The prerendered route naturally curtails any scenery interaction, but this is balanced by the wealth of lively non-player characters. They retain a sense of charm despite not being very intricate – but most striking of all is the vocal talent which brings them to life. Character dialogue is often amusing and always well delivered –





Silver sprawls over 270 backdrops encompassing dungeons, gothic mansions and Silver's fortress. The characters may appear diminutive, but that's their charm

Format: **PC**

Publisher: **Infogrames**

Developer: **In-house**

Price: **£40**

Release: **Out now**



The prerendered backgrounds hardly stretch the PC's capabilities, but they are suitably atmospheric – arguably more so than in *Final Fantasy*

not surprising, perhaps, with the likes of Tom Baker behind the mic.

But it's the realtime combat that sets the game apart from its conceptual cousin, junking the jarring and unwieldy turn-based system in favour of a fluid, intuitive mouse-controlled arrangement. By holding down Ctrl, you can slash the mouse around and watch your character replicate your moves: a swing to the left or right prompts a sweeping chop in the appropriate direction, a forward motion elicits a shish-kebabing lunge, and a backwards movement produces a whirling back slash.

Mouse-swing systems haven't always proved successful, but *Silver*'s works by not overburdening itself with features. It remains simple and flexible even as you progress through the game and bolster the hero's repertoire of flamboyant moves.

Unfortunately, realtime combat systems can make multi-character rucks frustrating. You'll pick up five companions on your travels, but you have to abdicate a good deal of responsibility for their performance in a scrap to the AI. However, it is possible – if inadvisable for novice players – to switch control from one character to another mid-rumble.

Additionally, there a couple of behavioural control options which enable you to customise your party's tactics. By binding them to the function keys you can decide whether, for instance, you want your spellcasters and archers to let rip with everything they've got at the beginning of the fight, or to keep up sustained sniper fire for the duration. Ultimately it works well, given the key to the system is its simplicity, and the loss of party control is more than compensated for by the fluidity of realtime combat.

Problems do occur, though, when the course of a fight takes characters back into the screen. As the scenes are prerendered and the camera angle fixed, it becomes increasingly difficult to make out what's going on as the characters shrink into an amorphous lump of pixels.

Moreover, the decision to narrate the plot using the in-game engine, rather than with cut-scenes, robs the game of truly memorable and emotive moments. It's a major omission because *Silver* is brazenly linear. The few choices it offers are painfully transparent, and you rarely feel you've done anything more skillful than obligingly follow the breadcrumbs the designers have sprinkled behind them.

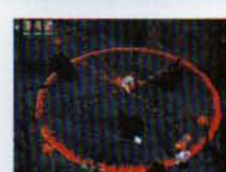
Essentially, *Silver* just wants to sit you on its knee and spin you a yarn, rather than give you the freedom to make one for yourself. But as long as you accept that, you'll find it a refreshingly light alternative to the usual PC RPG fare.

By **holding down Ctrl**, you can **slash the mouse around and watch** your character replicate your moves: a forward motion elicits a **shish-kebabing lunge**

Edge rating:

Seven out of ten





You're able to switch between characters during combat scenes, and even customise their control options to attack more effectively

WILD METAL COUNTRY







Although superficially it looks like a colourful arcade-style shooter, *Wild Metal Country* is an extremely technical game. Your first lesson is driving, then comes the tricky business of dealing with the ballistics of eight types of ammunition



The basic environment displays a remarkable level of detail. Gaining height advantage over an enemy shows tactical use of the terrain

With the game market maturing into a cash cow for the big corporations, few developers seem prepared to attempt anything novel. With *Wild Metal Country*, however, DMA has put together an ambitious mixture, drawing on firstperson shooters and off-road driving games in a dynamically modelled 3D environment. It may not be an obvious blockbuster, but it demonstrates the fact that some imagination is still alive and well within certain parts of the development community.

The plot, on the other hand, is merely functional. As a bounty hunter you must beam down to the three planets of the Tehric system, take on its autonomous machines and recover the infinite energy of the power cores. Originally designed to protect the cores, the war machines wiped out all biological life, evolving animal-like behaviour to supplement their mechanical exteriors. There are 17 species in total, each with AI qualities to match their animal avatars. These include skirmishing packs of Hyenas, and powerful Bulls that attack until destroyed. Equally fatal are the swarms of suicide-bomber Lemmings and deadly airborne Hawks and Eagles.

As the bounty hunter, there are five tank options for you to choose from. These range from the low-centre-of-gravity Mantra to the speedy Cheetah. In a similar style to the *Battlezone* coin-op joystick setup, movement is directed by four keys; forward and backwards for each track. Initially hard to get to grips with, it soon becomes intuitive. The turret is rotated by keys as well, use of the mouse having been ruled out as it was deemed to move the turret too quickly. Devotees of firstperson shooters will be surprised no sight is provided, instead using the space key increases barrel elevation, while releasing it fires. Shells follow correct ballistic trajectories, enabling skilled gunners to hit enemy formations from behind cover.

The most important feature of *Wild Metal Country*, though, is the depth of the 3D environment. Ranging from rolling hills to deep valleys, it becomes apparent that to survive, use of terrain is essential. Crudely put, this means height is might. Not only does







There are five different types of tank available. The low centre of gravity of the Mantra (above right) makes it a particularly good choice for beginners

Format: **PC/Dreamcast (PC version tested)**

Publisher: **Gremlin**

Developer: **DMA Design**

Price: **£35**

Release: **April (PC); TBA (Dreamcast)**





The unarmed Hippo (left) adds to the sense of hunting down moving prey on the occasions it carries power cores hidden within its cargo

altitude increase killing range, but the joy of dropping barrel mines on an unsuspecting enemy is palatable. Gaining height is not a simple question of pointing the tank towards a hill and going forwards at full speed. Most gradients are too steep, so accessible slopes must be sought. Imprecise driving will result in rolling a tank onto its roof.

The sheer size of the environments can't fail to impress. Ranging from early levels that can be completed in a matter of minutes, some of the larger ones clock in at well over an hour – the autonomy and scale are somewhat reminiscent of the original *Turok*. Yet, the larger *Wild Metal Country*'s levels become, the more strung out the action is. Much time is spent creeping around, avoiding enemy tanks until a tactical position has been gained and overwhelming firepower can be brought to bear. This is a game for the measured build-up and the quick kill. The nature of the enemy is such that most can destroy you in tens of seconds. Players will frequently need to call in repair helicopters after battles which adds to the stop-start pace of the game.

Much time is spent **creeping around**, avoiding enemy tanks until a **tactical position has been gained** and **overwhelming firepower** can be brought to bear

But for all its qualities, the one problem with *Wild Metal Country* is the constriction placed on the gameplay by the power cores. Despite the amount of moving around levels that takes place, the game's basis remains picking up stationary objects. It's only on the occasions that cores are located in cargo vehicles or the level bosses that the game fulfils its potential. The core stores also act as save points. When your tank is destroyed, it regenerates at the last store is visited. The quest, then, is to find the destroyed tank core and regain its ammunition, which breaks up the atmosphere. Tension, though, is never enhanced when gameplay favours throwing time over gaining skill. Which is not to say that *WMC* is not a good or skillful game. It certainly is. Its tendency, however, is to dazzle with technicalities rather than being fun level on level.

Where *WMC* impresses most, though, is in multiplayer. Up to eight players can compete, each starting with a power core, the winner being the first to gain all eight. It may not be as fast as *Quake*, but it certainly involves more thought. And it proves that the most exciting animal to hunt is man itself.

Edge rating:

Seven out of ten



Like their animal avatars, many of the weaker tanks prefer to patrol their territory in packs

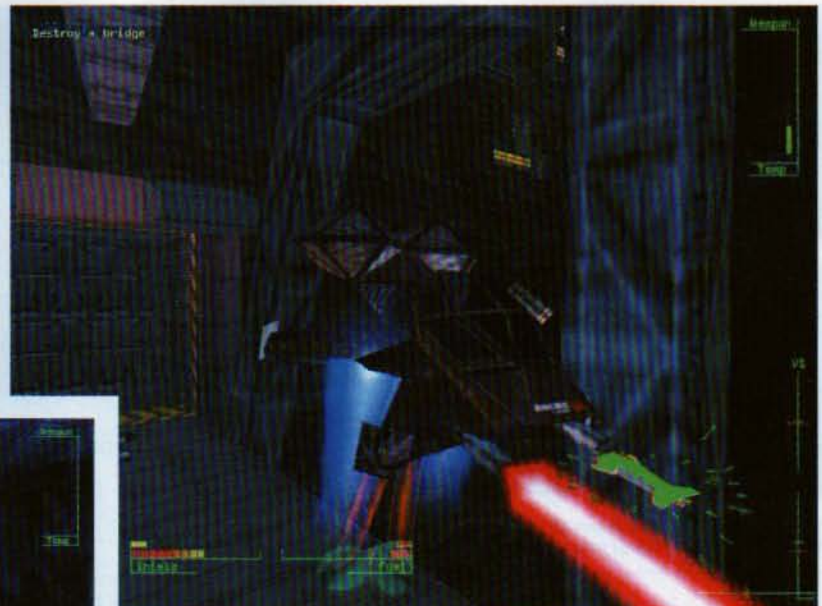




A Bull tank (top) is very aggressive and will attack until destroyed, whereas the small Lemming (below) is unarmed, except for its powerful suicide bomb

LANDER









The graphics throughout are crisp and concise, and they serve their purpose admirably, with some excellent results

The control system takes a while to familiarise yourself with, which makes *Lander* one of the least immediate titles available. But this is essentially what makes it so different from the other space-based games around

A long time ago, in an arcade possibly not too far away, *Gravitar* no doubt robbed some of you of significant amounts of pocket money. And a little further along the timeline, *Thrust* probably kept a lot of people glued to their 8bit machines. The subsequent silent period this particular genre suffered was only briefly interrupted when *Oids'* gravity-influenced gameplay brightened up the 16bit age, but there has been little seen in the same category since.

Lander hopes to change all that. Taking its inspiration from the aforementioned titles, it incorporates their essential gameplay aspects in an updated, millennium-ready version. The year is 3032 and for the first time in history planetary alignment is imminent. As a commercial lander pilot trying to acquire enough monetary units to obtain a holiday villa offering an unobstructed view of Saturn's rings, you can't resist the chance to undertake a series of deep space industrial contracts across the various planets of the solar system. However, the retrieval of an alien artifact from a Mayan temple following a scientific expedition sparks a frantic multi-corporational and interplanetary search for its origin and the secret it holds. Suddenly, things get a lot more complicated.

Presumably, this is how the majority of people will initially describe *Lander*'s control system, too. Admittedly, your craft's ability to manoeuvre through six degrees of freedom may bring forth a few expletives, but in truth, **Edge** can't think of a more intuitive way of navigating your lander around the various treacherous environments. Every aspect of the lander's motion is controlled via the mouse ('thrust' and 'fire' are assigned to the mouse's buttons), while the traction beam is operated with the space bar, and the camera is easily manipulated to display the most appropriate view via a quartet of keys. Should panic set in, a quick press of the stabilising key returns your craft to a levelled position, as well as proving useful when you've landed upside down on Martian soil.

After the compulsory training missions (which can be repeated if

Admittedly, **your craft's ability** to manoeuvre through six degrees of freedom **may bring forth a few expletives**, but in truth, **Edge** can't think **of a more intuitive way** of navigating your lander

Format: **PC**

Publisher: **Psygnosis**

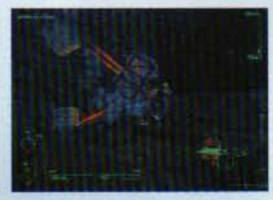
Developer: **In-house**

Price: **£35**

Release: **Out now**







Getting to grips with the targetting system of the initial weapons can prove labour intensive. Thankfully, some of the later weapons are self-guiding



The sound effects are very convincing (particularly in Dolby Digital on DVD), although the music can get a little grinding after a while











The several landers available all boast a variety of handling characteristics, as well as different armament and armour capacity to suit your flying style

required) your lander's behaviour should feel a little more familiar, but the pitch and roll sensitivity is adjustable and well worth persevering with until you find a setup that best suits your flying characteristics.

By now, the prospect of the first mission shouldn't frighten you off and, as it's a simple search-and-obtain sortie, it shouldn't prove an unrealistic challenge either. Naturally, later missions increase in complexity – both geographically, logistically and in enemy hostility – yet their overall structure remains disappointingly similar, with most of the focus centred around your craft's ability to carry suspended objects using its traction beam. While the way this realistically affects the lander's handling is admirable, a little more variety in the assignments you undertake would be welcome. Also, regardless of how apt a pilot you become, there will still be moments within the confinements of cramped passageways deep beneath the surface when the proceedings feel a little awkward and it's possible to get your craft stuck in places where no amount of thrust can dislodge it, forcing you to abort the mission.

Still, there is plenty to do when not aboard your gravity-defying lander, which helps better your chances next time out. Successful missions reap financial rewards which in turn can be used to upgrade your craft's abilities (namely weapons, armour and engine – the latter recommended as the first investment considering its stabilising effect on the craft's handling) or buy a better lander altogether. Commendably, Psygnosis has convincingly created a futuristic virtual world. Job offers, news, personal messages – even the lottery – arrive in the form of emails, and your actions during missions have an effect on the overall game. For example, you can save a particular character from certain destruction and not only do you get a thank-you email once you get home, but one of his acquaintances just happens to have another job for you. It's not a revolutionary touch, by any means, but it helps fuel the 'Total Recall'/'Blade Runner'-esque feel *Lander* attempts to convey.

Nostalgic types will no doubt relish the stylish return of a long-forgotten genre. Today's gamers, however, may lack the patience to acquire the skills necessary for discovering the immersive and highly enjoyable qualities *Lander* has to offer.

Edge rating:

Seven out of ten

WARZONE 2100





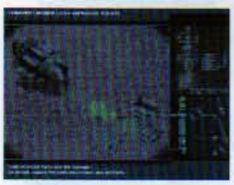


Using 3D line of sight, the AI enables you to send units into battle without having to nursemaid their every move



There are three campaigns to encounter, which take the battle from the sands of the desert to the city ruins, and into the Rocky Mountains











Research makes it possible to construct new vehicle types, using three main building blocks to keep the process speedy (above)

The realtime strategy genre has taken a surprising amount of time to evolve graphically. While other formats embraced advances in 3D technology almost two years ago, it's only now that developers are moving the battle into 3D. First impressions suggest *Warzone 2100* treads the same path as *Wargames*, but while MGM's movie spin-off stripped back the familiar RTS framework to provide a more accessible arcade-style experience, *Warzone 2100* piles on more features than even the most ambitious top-down titles can muster.

In terms of story, this debut from Pumpkin Studios conforms to type, with a post-apocalyptic scenario providing the excuse for war-ravaged landscapes and futuristic, yet familiar, military technologies. Naturally, there's also the usual emphasis on the construction of bases, with limited resources with which to expand that empire. More power facilitates faster construction; research yields improved vehicle technologies; and the range of building and vehicle types available expands almost by the minute. In these early stages at least, *Warzone 2100* is little more than a *Command & Conquer* clone with a roaming viewpoint.

Where things get interesting is in the level of control players have over the construction and deployment of units. Research often focuses on components, rather than whole technologies. By flipping to the design menu it's then possible to generate new unit types from the building blocks on offer, choosing a method of propulsion, body types and weapons for new vehicles. With a total of more than 100 weapons, and later levels introducing hover and even VTOL (vertical take off and landing) technologies, the opportunities for amassing a truly customised army become most impressive. What's more, non-combative turrets can be attached to vehicle bodies, enabling you to produce mobile repair units, sensor-equipped scouts, and even signal-jamming tanks.

The opportunity to fine-tune units' behaviour is equally comprehensive. Commander units soon become available, which can be assigned to control a whole army of vehicles, or can laser designate a particular target, ensuring large scale combat doesn't become too overwhelming.





Format: **PC**

Publisher: **Eidos**

Developer: **Pumpkin Studios**

Price: **£40**

Release: **Out now**

The icon overlays are painstakingly designed, providing strategists with an impressive level of control over unit construction, movement and combat



Battles come alive in spectacular style, with the screen visibly shuddering during large explosions. And while the 3D isn't the best around, good lighting and fogging effects ensure 3D card owners won't be disappointed

What makes the game so accomplished is the way such a level of control has been integrated into a 3D game format. The ability to move, rotate and zoom the viewing angle can be disorientating enough in these titles, without the problems created by an overly complex user interface. Yet, thanks to sensible icon design, pop-up systems that negate the need for screen-flipping, and a setup that doesn't badger you to make use of the more advanced features (though ultimate success will require an understanding of them), *Warzone 2100* is a joy to take control of.

At the simplest level, it's possible to drag and drop to select units, send them to a position, have them construct a building, or go into battle. But a whole range of extra possibilities are also at hand, from instant 'return to HQ' commands, to aggression level controllers, waypoint assignment possibilities, and even controls to automatically assign newly built vehicles from a particular factory to a commander. It's inevitable that some battles are simply too intense for such flexibility to be useful, but with careful pre-flight planning, the extra facilities offered here can prove invaluable.

Progression is linear, but thanks to the use of three distinct campaigns, each with main and sub-maps, this never really presents a problem. Using these maps is particularly entertaining, with transports ferrying units to these new maps in small loads, resulting in missions with severely limited resources. The game also works hard to promote multiplayer combat, with Eidos' free gaming service making internet play an attractive option.

Thanks to **sensible icon design** and a setup that **doesn't badger you** to make use of the more advanced features, *Warzone 2100* is a **joy to take control of**

Clearly *Warzone 2100* has all the RTS bases covered. It's the first game to make real use of that extra dimension without compromising gameplay. And it presents the most approachable user-interface around, ensuring both the empire-building and frenetic combat elements of each mission are both equally hassle-free. And even though the visuals are little more than average in the general scheme of things, in this particular genre the landscapes, vehicle designs, and explosion effects are up to scratch (and the audio is better).

And yet, this isn't quite the next-generation wargame **Edge** had hoped for. Despite getting every single aspect of the design correct, the actual gameplay is all too familiar. And as splendid as the control options are, the actual process of building up armies and going into battle fails to break from convention. That said, it'll be interesting to see whether *Tiberian Sun* can offer something a little more innovative.

Edge rating:

Seven out of ten

CIVILIZATION: CALL TO POWER

Format: **PC**

Publisher: **Activision**

Developer: **In-house**

Price: **£40**

Release: **Out now**









Maps are randomly generated and cater for up to eight races battling for supremacy, be they human opponents or computer-controlled



As technology advances, the depths of the oceans (top right) and spaces become explorable. Naturally they also provide new locations for battles







One of the most fascinating aspects of *Call to Power* is the introduction of unusual unit and technology types. Lawyers, eco-terrorists and advertising are just three ways to gain an advantage over the other empire builders

One happy outcome of the legal furore surrounding the computer game rights to the original Civilization boardgame is that fans of the format are now spoilt for choice when choosing a modern incarnation. Last month saw the launch of unofficial follow-up/re-write *Alpha Centauri*, Microprose is set to release *Civ II Gold* in the near future, and now Activision has a fresh take on the concept.

The most radical change with *Civ: Call to Power* is the introduction of a longer timeline. It's now possible to play from the first ages of civilised Man right up to the year 3000, with appropriate technologies and lofty goals to accompany the extra opportunities for empire expansion. Initially, the struggle to establish a successful empire is more earthbound though, with early tasks involving creating soldiers, settlers to start up further cities, and the development of temples and basic food facilities. Control is exerted using turn-based movement around the map (though you can switch to a more demanding realtime clock), with the menu at the bottom providing extra control – there's noticeably more information on tap than in *Civilization II*, and more possibilities for fine-tuning, too. Players can even adjust pay and the length of a working day if they wish. A job queue now also exists for each city, although, annoyingly, it's not possible to easily re-jig task priorities.

There are five ages of Man to work through, each featuring a new range of character and technology types. Not all become available automatically, though. It's possible to lead as anything from a peace-loving religious zealot to a violent dictator, the path taken down the branching technology tree (embracing over 100 advances and 65 unit types) reflecting this. The climb from toying with sail boats to sending space marines is a long one (several whole days of play, in fact), but with such a strong sense of progression it's all too compelling.

Of course, this structure also powers the excellent *Alpha Centauri* (nine out of ten, **E**69), so comparisons between the two are inevitable. Despite the attempts to modernise the user interface and general graphical presentation, *Civ: Call to Power* is the least accessible of the two. In contrast to *Centauri*'s flexible user interface, the one employed here feels stilted and limiting. Opponent intelligence isn't as prominent, either. Combat, on the other hand, is better handled, with greater scope for formations and strategies. And the semi-factual nature of the scenario (and therefore the tech tree) also lends extra weight.

In isolation such modifications don't amount to much, yet *Call to Power* feels markedly different from Fireaxis' game. And what with that expanded timeline, more detailed combat, and various concessions to modern machine specifications (including a selection of multiplayer options), it succeeds in its aim to retain the best elements of early *Civ* titles, yet provides a noticeably friendlier and better way to conquer the world. Which is as much as any strategy fan could have hoped for.

Edge rating:

Nine out of ten

BLOODY ROAR 2

Format: **PlayStation**

Publisher: **Virgin**

Developer: **Hudson Soft**

Price: **£35**

Release: **Out now**



Busuzima redefines the meaning of giving an opponent a good licking









Graphically, fighting games are one genre in which the ageing PlayStation can still shine, with large numbers of polygons dedicated to the characters

Over the last few years, a number of game genres have begun a seemingly inexorable decline from hot to not. The traditional fighting game, then, is facing stiff competition from a range of increasingly sophisticated newcomers. With even the mighty *Tekken* series faltering in its appeal, and Capcom forced to take dramatic new directions (see p70), Hudson Soft's *Bloody Roar* sequel is a brave move.

That's not to write off *Bloody Roar 2* at the outset, though, even though the original was awarded eight out of ten in **E**59. If nothing else, Hudson's first *Roar* injected a breath of fresh air into the stale beat 'em up genre. As before, you control one of a selection of shape-shifting combatants, each superbly fashioned from the limited number of polygons the PlayStation has to offer. Stylistically, at least, the *Bloody Roar* series is up there with its contemporaries; all flash effects and cool, manga-influenced characters.



Slamming into the beast mode is always a rewarding experience

Although represented onscreen by polygons, fights take place in a single plane. There's none of *Virtua Fighter 3tb*'s nifty slipping around opponents and dodging blows. Combat is a head-on affair, and mostly consists of timing the best moment to land the biggest blow, and judging when to activate the 'beast' mode. This can't be done until a power meter – separate to your character's main energy bar – has been filled by receiving a few hits from your opponent.

Accompanied by an explosive burst of light, pressing the beast button morphs your fighter into their animal alter ego, unlocking a menagerie of bats, chameleons, leopards and tigers. As you'd expect, all have their own range of attacks, which are expanded once the beast mode is activated. Even in its second iteration, this remains *Bloody Roar*'s finest feature.

What doesn't prove quite so acceptable is the slightly detached feel to the control system, particularly after the razor-sharp responses of *VF3tb*. Ignoring platform differences, playing *Bloody Roar 2* occasionally leaves you with the impression that you've lit the touchpaper and stood back to watch the show (while the rock-u-don't-like background tunes screech an accompaniment). As with so many fighting games the real enjoyment comes from the twoplayer mode, with the single gamer bound to feel disappointed by the limited bonus characters and disjointed 'story' mode. Strangely endearing, nonetheless.

Edge rating:

Six out of ten







Gameplay-wise there's little to distinguish *Bloody Roar 2* from its predecessor, meaning that it's a lot of fun, but too shallow to ever make the tenth dan

CSK: Digital futures

Formed in 1983, CRI is a little-known research wing of the giant Japanese CSK corporation, which also counts Sega Enterprises among its list of subsidiary companies. Most of the facility's efforts are directed at developing multimedia software tools for entertainment platforms – including Saturn and Dreamcast – and it was in the latter capacity that representatives **Misao Matsushita** and Masao Oshimi recently met up with **Edge**.

MPEG Sofdec

The first topic of discussion was *MPEG Sofdec* – a new version of CRI's video codec software, developed for Dreamcast games. *MPEG Sofdec* can compress movie files to 1/50th of their original size, allowing two hours of film footage to be squeezed onto a CD-ROM. To showcase the software, Matsushita played the opening FMV sequence to *Sakura Taisen 2*, comparing the new Dreamcast *MPEG Sofdec* version with the old *Cinepak*-compressed version running on the Saturn. The results were, of course, noticeably superior – and, as the signal is processed entirely in digital, there is no loss of quality after decompression.

Although a version of *Sofdec* was available to Saturn developers, the new software is primed to exploit the advantages of the Dreamcast – specifically the 'super scaler' feature of the machine's Hitachi SH4 processor.

Matsushita explains: "The SH4 works similarly to the present Pentium chips, and, indeed, all RISC-based chips. Usually, on a regular processor, one instruction is processed per clock cycle. With the Super Scaler, up to four instructions can be given. Naturally, the higher number of instructions per cycle, the faster the processing."

Interestingly, this hardware feature means that Dreamcast can play an MPEG movie in the background while displaying realtime polygon animations in the foreground. The MPEG decompression takes up 50 per cent of the CPU power at a resolution of 320x240, leaving 50 per cent free for game visuals. The question is, how many polygons can be thrown around a screen already playing MPEG footage?

"It depends on the kind of effects you want to use," admits Matsushita. "Let's say Dreamcast can display three million polygons per second – theoretically, we can display half this figure. In practical terms, however, it is lower – it can be around 300,000 polys, it really depends. To give you a concrete example, in *Sonic Adventure*, the scene where the Egg carrier is falling uses both background movie and polygon characters (Sonic and Tails). This scene displays 4,000 polygons per frame – approximately the same polygon performance as the PlayStation."

Interestingly, as *Sofdec* is a software rather than hardware codec solution, there's room for improvement in future Dreamcast titles. "There are different directions we can go," points out Matsushita. "We can increase the compression speed, to improve the resolution. Presently we offer a resolution of 320x240, but we want to double the vertical resolution. At the moment, we use half the CPU power, so we could use 100 per cent of the power in the future and offer resolutions like 620x240, or 320x480. We actually made a customised version of *Sofdec* for *Sonic* which offered a double vertical resolution."

MPEG Sofdec specifications

Graphics stream:	MPEG1 Video
Framerate:	30fps, 24fps
Image Size:	Normal size – 320x240 pixels to 320x480
Bit rate:	600Kb/s to 5Mb/s
Output Image:	Full colour (24bit, 1,600,000 colours, YCC 4:2:0)
CPU Load:	50 per cent (320x240x30fps: 2Mb/s)



CRI's new development tools, audio application *ADX* (top left) and video software *MPEG Sofdec* (top right), will enable developers to get more out of Dreamcast's SH4 processor

Further in the future, Matsushita has not ruled out supporting MPEG2, although licensing the technology is expensive – and the increased quantity of visual data the standard can deal with will improve the basic video's production values, raising game development costs. However, as Matsushita asserts, they have two options: "We can raise the quality and improve the compression, or reduce the compression and make it lighter so that it uses only 10 per cent of the CPU power." The only question is what developers will choose to do with this access to CPU-lite movie footage...

ADX

Another recent development at CRI is *ADX*, an intriguingly flexible multi-soundtrack application with several tricks currently not possible with the standard CD format. Most importantly, any game that includes *ADX* can play up to eight tracks from the same CD simultaneously – something which has never been seen (or rather heard) before. This feature is possible due to the high speed of the Dreamcast GD-ROM drive – at 12x speed it can access the eight tracks one at a time, store them in the buffer and then play them together with no discernable lag. **Edge** tried out a demo of the software, with several sound effects (rain, sea, voices, etc) accessible via the control pad. While selecting each sound, it's possible to hear the Dreamcast reading ahead looking for the right track. Impressively, the CPU plays almost no part in *ADX*'s performance – the software uses just one per cent of the SH4 processing power.

And there are more features to this excellent audio tool. *ADX* can also compress sound data at a rate of 1/4 with almost no loss in playback quality (indeed CRI tested the sound on 20 volunteers, and nobody could tell the difference between CD and compressed *ADX* audio). The software also enables game musicians to loop music with no blank phase between replays – this will allow them to replace long background scores with much shorter, looped tunes, thereby clearing more space on the CD for game data. Also, players will be able to customise the game sound effects, fading some sounds up and some down according to preference. CRI has also thought about ease of use, including an index for each audio file so they can be numbered and retrieved quickly. *Sonic Adventure* has already used *ADX* to good effect, but no doubt the full possibilities of the software will be realised as developers grow more accustomed to Sega's machine. E

The trials of a start-up developer: part eight



After co-founding Lionhead Studios with Peter Molyneux, Demis Hassabis set up his own development house, Elixir Studios. The team is busy coding, yet there are still a lot of contractual kinks to iron out

Juggling act

"The office has been in the grip of a *Starcraft* obsession for the last couple of months. It's undoubtedly a very good game [seven out of ten, **E**59]. The balancing is exquisite, and the plot and ambience are excellent. There's no doubt that it's the RTS genre at its very best and yet I can't help but feel that I'm still playing the same game I've been playing for the last seven years. Don't get me wrong, I loved *Dune II* and *Command & Conquer*, but I'm pretty sure I've squeezed every ounce of enjoyment from the genre that I possibly can.

Every developer under the sun will tell you that his game is 'revolutionary'. Egged on by marketing people they'll encourage you with clichés such as 'genre-defining', 'immersive' and 'compelling'. But how many of them are actually doing anything fresh and original? In 1998 over 30 *Command & Conquer* clones were released. And then there are also huge numbers of sequels being churned out. I recently took a look at a major PC magazine's list of 100 top games for 1999. Roughly 75 per cent of them were sequels or derivatives. It's a sad state of affairs.

Has the games industry become a victim of its own success? These days a game takes two years to make and costs over a million pounds, which is a lot of money. You can understand why publishers are unwilling to invest that kind of money into a new concept. Yet without innovation the industry will grow stale.

For me personally, two years of working on a pale facsimile of someone else's work would be a fate worse than death itself. When we show our game for the first time we hope that if nothing else, people will think it's an original concept. Of course everyone says this sort of stuff and I'd expect you to greet much of the above with a healthy degree of cynicism. We're hoping that you'll be pleasantly surprised.

The period from September up until Christmas has been a relatively tough one. Having agreed commercial terms with Eidos in September, we had to wait until December before actually agreeing on the deal. It's been pretty tedious, and most of my days were taken up with debating legal minutiae with Eidos' lawyers. If I wasn't doing that, I was poring over a 100-page contract. Had it not been as important as it was, I would gladly have rolled over and thrown up my hands in surrender. But I simply couldn't do that. You see, the actual commercial terms (ie, money and royalties) were agreed early on. It's the other 80 pages that were the problem. Lurking beneath the impenetrable legal jargon lay all manner of booby traps that could have caused us problems at some point down the line. Had we not had initial funding there's no doubt in my mind that we would have been forced to sign a deal that would have come back to haunt us. There was nothing underhand in all this. Eidos was simply trying to negotiate the deal that was best for itself, as I was for us. It was a major weight off my mind when the deal was finally signed, just in time for Christmas.

Much of my coding and designing had to be done by night as a result. I don't mind this at all, though, as there are always people about and there's an excellent sense of camaraderie. Because we're a small team we have a very flat structure and everyone gets involved in the design of the game. We aimed to have a very basic, playable version of the game up and running as soon as possible. The usual plan is to code by day and then playtest at night. The next day we talk about what worked and what didn't. We then tear things out and put other things in. I don't think there's a magic formula to getting great gameplay – you've simply got to play the game for thousands of hours before you can be sure that it's both fun and balanced.

"The usual plan is to code by day and then playtest at night. The next day we talk about what worked and what didn't"

Obviously this takes a lot of commitment from everyone. People spend a lot of time here and I'd like to think it's because they're enjoying what they're doing. There are downsides to this dedication, though. I've recently introduced the concept of an office fruit bowl in an attempt to stave off an impending scurvy epidemic. These people clearly take their jobs very seriously, so much so that they've taken the developer lifestyle to heart. I suppose you could call this Developer Chic. Clothes with holes in are *de rigueur*. Black is, well, back. Oh, and an atrocious diet is a must. Richard, one of our programmers, is a developer's developer. He keeps a loaf of bread on his desk and appears to live on a diet of Nutella and Sandwich Spread sarnies which he assures me is the cornerstone of every nutritious breakfast. Another favourite is scrambled egg on toast, drenched in vinegar, with a dash of salad cream, finished with a layer of tomato ketchup. If nothing else, I give him full marks for originality."



The Elixir team is often absorbed in the throes of a *Starcraft* session, although the lack of a really original concept drives the team to develop its own



Edge moves

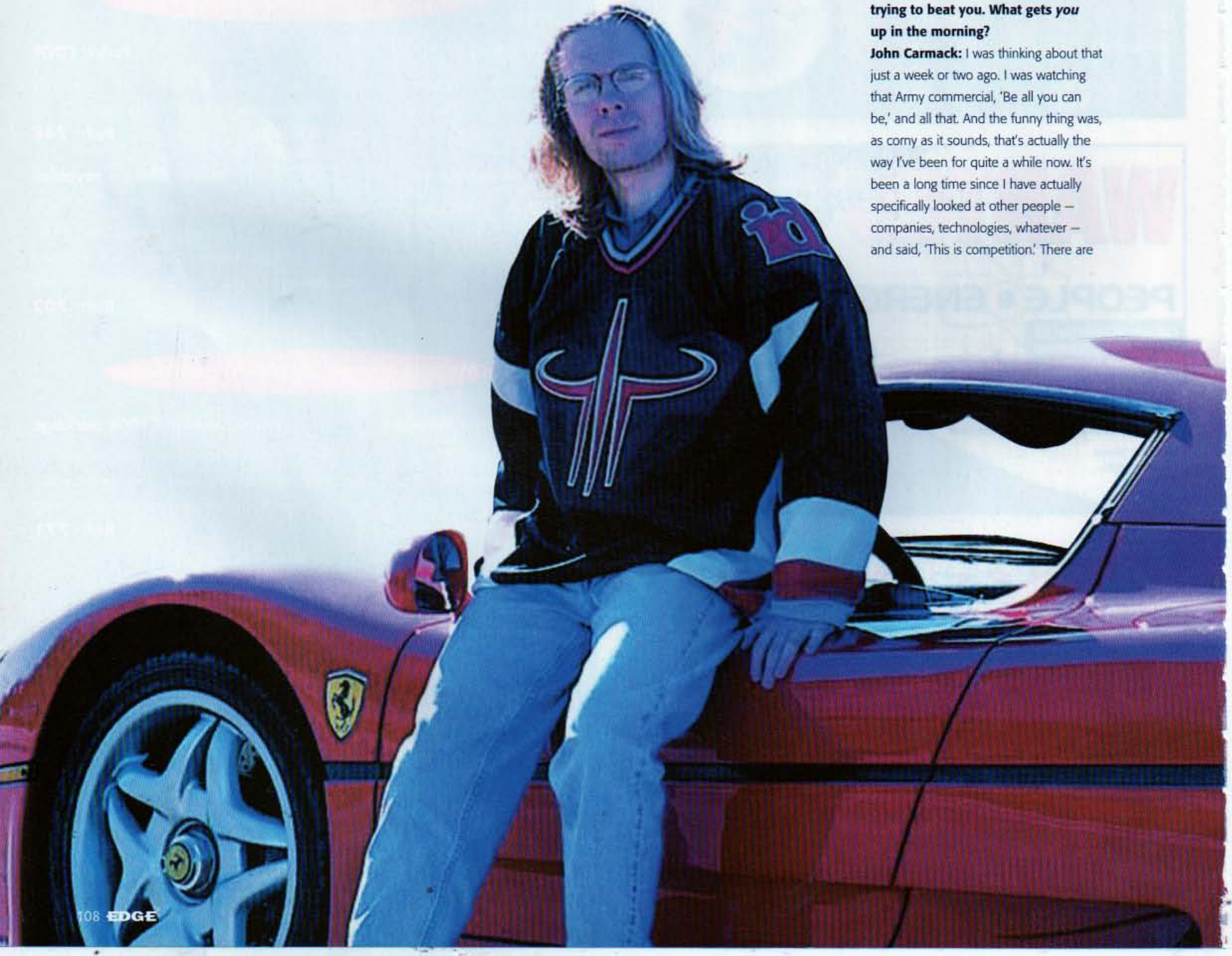
Programmers, artists, engineers, producers, animators, project managers – they're all essential to the industry, and they all read **Edge**. The following pages carry a phenomenal variety of jobs for graduates, professionals and any other interested parties who think they could make it in the videogame scene. Apply within...

an audience with...

John Carmack

No one sets out to do an *Unreal* killer. Despite the best efforts of the brightest minds in the industry, John Carmack's id Software creates the games, and the engines, to beat. And every time someone comes close, id raises the bar again. Edge met with the legend to find out what lies ahead for 3D shooters, and what drives the man widely regarded as the best game programmer on the planet...

After creating the epic *Quake* series, and making enough money to indulge his passion for exotic cars, Carmack continues to push technology forward faster and further than anyone else. Edge meets the man and the machine



Edge: Most people in the 3D shoot 'em up business are motivated by trying to beat you. What gets *you* up in the morning?

John Carmack: I was thinking about that just a week or two ago. I was watching that Army commercial, 'Be all you can be,' and all that. And the funny thing was, as corny as it sounds, that's actually the way I've been for quite a while now. It's been a long time since I have actually specifically looked at other people – companies, technologies, whatever – and said, 'This is competition.' There are

all these directions where I see things I want to explore. So almost all the push comes internally. I constantly evaluate myself on things I've done well or need to improve. And I seem to find enough motivation just from what I set myself up for without ever having to worry about all the things other people are doing. And I'm sure that saves me a whole lot of stress. I stopped following a lot of the Web-based coverage because I was just getting annoyed or upset when people posted various things that may or may not be true. I don't need to hear any of that because I've got enough direction from all the things I've already got planned out.

Edge: Does the quality of your work, and id's work, in some part stem from being on top, from not having to pay a lot of attention to what else is happening in the industry?

JC: I do think there's a lot of benefit to be had from having enough confidence in your own decision-making process to go ahead and forge forward. It's certainly possible to do something that's pretty good just by looking at the landscape around you. You say, 'These are all the things that everyone's done,' and you improve from there. That's a valid way of doing things. And there are going to be some high-quality projects that are done like that. But every once in a while you need to take a step back and say, 'Okay, things have to move in some direction somebody hasn't done before.' And that's where you set yourself up for risk, because it's possible to spend a lot of time on something and it just doesn't work out. If you restrict yourself to things that other people have demonstrated can be done, then you've got a very low-risk project. It's still a huge amount of work to put something like that together, but when you want to go ahead and take a major step into something really different, then you set yourself up for long schedule overruns, not delivering features you thought you could, and various things like that.

Enter the Arena

Edge: So, is *Quake III* going to be taking a step back?

JC: The current hardware trends and the things that are available to us put this project at a point where what we're doing is a high-quality refinement of various things. It's going to be a little while before the next scary step in engine development happens – where you get away from spitting back models and environments that you've got rendered and go toward synthesising environments from another format. We're not there yet. I looked at a lot of things when we were beginning this project. When I was doing what was going to be *Trinity* [now scheduled as the fourth *Quake* instalment], I investigated a lot of different things. Things like voxels and all sorts of interesting, very, very different representations from what we've done so far. And I looked over all of it and thought that there are some definite benefits for pursuing those.

Edge: So why go with what is essentially an improvement on traditional architectures? Why not take that scary next step?

JC: We're just not quite to the point where we can rely on those new technologies, certainly not at the framerate levels that we want. I had to look at the data and [to make it viable] project towards the point where we've got, say, hardware accelerators that can render several million triangles a second

"It's been **a long time** since I have actually looked at **other people** – companies, technologies, whatever – and said, **'this is competition'**"



Photography: Michael Mordler





through an API, not just the raw performance of the card. And you can ship on a DVD with no problems. Then you can look at creating a perfect voxelisation of the entire world, with no repetition whatsoever, and dynamically rendering re-synthesised parts of the environment. And that's a completely different problem than what we're working with right now. But the time is just not right yet.

Curved surfaces

Edge: That said, the *Quake III* engine, with its emphasis on bezier mesh curved surfaces, is essentially unlike anything seen in realtime before. How hard has it been to implement?

JC: Well, this is technology that's been done since the late '60s as far as the different geometric representations go. At the beginning of 1998 I did my curved surface research – I had never done any curve rendering before. The biggest thing I learned was that curved surfaces aren't all they're cracked up to be. When you're used to drawing things with triangles, you think, 'Oh, we'll just go to these curved mesh things, and everything's going to be wonderful.' But there are so many problems that you aren't even aware of until you actually get in and start using these representations – bad things that happen when you degenerate edges.

Edge: You're using nonrational quadratic bezier meshes in *Arena*, so everything is defined by distorting nine control points in 3D space. Why did you decide against cubic patches, which would let you be more precise?

JC: What we're using is about the simplest possible representation. With quadratics you can guarantee that they meet up smoothly, but you can't guarantee that the second derivative of curvature stays constant across there. You need a cubic curve for that. But most people don't even know what a second derivative of curvature is and can't really notice it. It's something of mathematical interest for things like airplane wings. Having a lower degree there is a really useful thing. It just makes it easier for the level designers and so on, because to define, say, a cylinder with quadratic, which is like four patches wrapped around on a side, for us that winds up being nine points around, but with cubic it's like 15.

And then there's the issue of rational vs nonrational. Technically, you need a rational curve to make a conic surface. Now, there are lots of conic surfaces that are pretty important – exact cylinders are the most common things. Our columns in *Quake: Arena* are not actually round. They're a quadratic approximation of a cylinder. If I had made rational curves, then they actually could have been round. But it's just not that big a deal. If you really look at it, especially from a top view, you can see that it's a little bit more squashed than round. But for building things architecturally in the level editor, I'm quite happy with the simplest possible curve representation.

Edge: Are people going to continue to build their game worlds with polygons?

JC: NURBS are not the real successor to polygons. I can say that pretty definitely. They may wind up becoming prevalent through various standards, irrespective of their merit – say, if Microsoft standardises a NURBS format, then everyone's going to have to support that. It's possible that they might win out as the next format. But it won't be through their own merit. It would be through outside political forces. Things like subdivision surfaces or displacement mapping generally have better results, especially for characters.

Edge: What's wrong with NURBS?

JC: In the long term, surface representations like NURBS are boundary representations just like polygon meshes.

"Right now is the golden age of triangle rendering. Everybody's got their shit together, there's some high-performance, high-quality stuff. It's a great plateau"

And they're not the right way of doing things. The analogy that I usually make is that NURBS vs voxels is like vector vs raster graphics. Vector graphics, drawing everything with lines, is basically what we're doing right now in 3D. We've got a description of a couple end points and a connected surface between it. And it has all the same problems that 20 or 30 years ago everybody was running into with vector stuff. You pile on more and more of them, and your refresh rate slows, and you've got this linear dependence on complexity. At the time everybody said a raster bitmap would take up a megabyte of memory – so, of course, it was put off. If we did an entire level made out of very detailed voxel representations, it might take a couple of gigabytes of memory. So everyone says, 'Oh, no, a couple gigs of memory seems completely unrealistic.' But it's not that far off now. When you can just throw a solid representation of something in there, it's going to be a far better solution than all of this multi-resolution modelling, hierarchical surface stuff. That's where things are eventually going to end up. And the transition to it is going to be a god-awful mess. Right now is the golden age of triangle rendering. Everybody's got their shit together, there's some high-performance, high-quality stuff. And there's this really wonderful window – what we're optimising for right now in this generation. It's a great plateau.

But the only reason we're where we are with triangles is because everybody's been cribbing off SGI. The problem is that everybody is basically now at the same level as SGI is, and all of these companies' in-development hardware is faster than SGI's Infinite Reality. So they're going into things that SGI hasn't. It's going to be a chaotic mess.

One of my biggest goals over the next year or two is to try and prevent hardware vendors or Microsoft from doing something stupid with their internal stuff. A NURB API would be a perfect example of something stupid. But there's a lot of people who don't know it's a bad idea, and some of them are making important decisions. But it does kind of highlight a problem: when we do step into something new, something that people haven't done before, how is it going to work out? If there are a half-dozen competitive 3D graphics companies, who's going to be the first one to do something fundamentally different? How is it going to intermix with the other things? It's certainly going to be an interesting next five years or so.

Gameplay goals

Edge: Despite its advances, *Quake: Arena* may not represent a total leap in technology, but it may in gameplay, with the shift away from a quest or story mode and towards a multiplayer-only paradigm. What are your goals for the gameplay, especially the singleplayer mode?

JC: My goal for the game is [to create

something where] a new player can take it, learn how to move the character, learn the basic skills, then pick some levels and play through them with a varying level of bots. Something where they'll start off really easy, build up their skill level, and then go ahead and play in public on the Net or with their friends. And that's a level of training we've never had before.

Edge: Since *Wolfenstein*, id games have almost defined the state of hardcore gaming on the PC. To some extent, *Quake III*'s emphasis on the online, multiplayer aspects of the game continues that trend. But at the same time you're consciously trying to bring the Hasbro crowd – the casual gamers – into this area of gaming that is traditionally the exclusive domain of the hardest of the hardcore gamers. Why?

JC: If we thought we could do a game that just catered to the existing online crowd, and we thought there were going to be as many of them as bought *Quake II*, we might have done a more specialised title. But we don't want to do a niche game. We want to do games that are popular; it's nice to have a game that sells a million copies.

And there are other elements to it. With cyber-athletes and the PGL [Professional Gamers League], there is a future direction there. I don't think it's coming now, or even next year, but as we look forward, making videogames more accessible as a popular 'sport', moving them into something that more normal people can enjoy and have access to, that's the future.

Edge: Why can't newcomers to *Quake* learn the old-fashioned way, by logging on to a server and getting killed hundreds of times?

JC: We have a much higher threshold of entry into the *Quake* community now. There are so many people that are really good on the various servers that if *Quake II* is your first firstperson shooter, and you play around a little bit and then jump online, you won't have a very good time. You'll be in levels that you don't know how to run – you won't know the proper strategies. For some people that persevere, that go through the long times of being absolutely pathetic in there, they'll build up their skills. But we'd like to make it so the step of being pathetic in public doesn't exist; we'll give you a place where you can build up a set of skills at your own pace and get to the point where you're comfortable with them before going out. That enables you to enter the online community at a reasonable level.

Edge: How low, ultimately, do you think the barrier can go? Is there a level of gamer that will simply never be able to play a fast, action game like *Quake*?

JC: Well, we want to make the barrier to entry as low as possible. We want it to be a game that you can give to your father to play – somebody that's not really, really seriously into games. Some of the things that we're doing along those lines are designing sets of levels that don't necessarily require looking up and down. We've always pushed that ability, since we moved away from *Doom*, as an example of, 'look what we can do differently.' But the truth is it's not an inherently beneficial part of the game.

Edge: Some hardcore gamers would disagree with you.

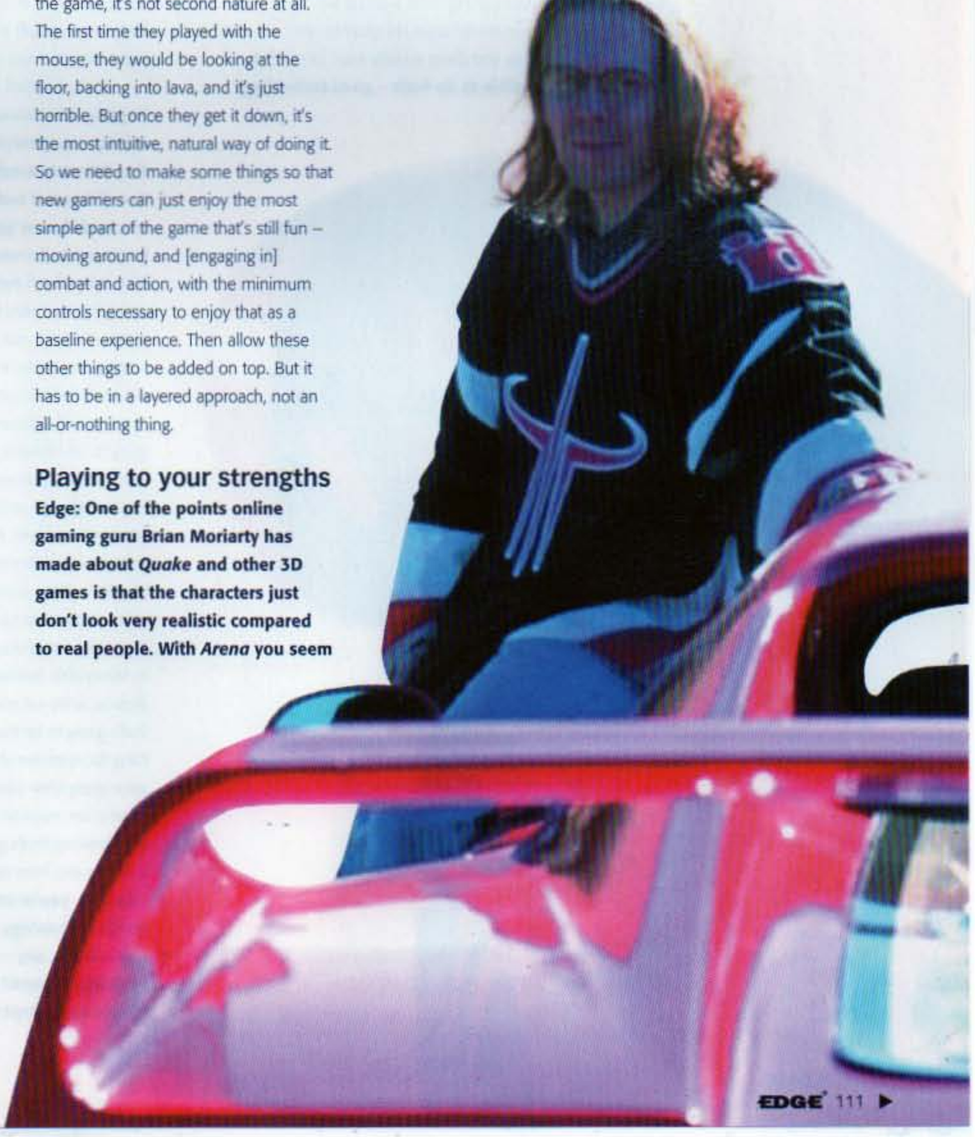
JC: It's one of those things. Sometimes when you get a strong game community, you get this unhealthy, inbred push, where the gamers want more and more sophistication, because all of the actions that are in the basic primitives are totally drilled into their minds – they've become second-nature reflexes. These gamers can be working with five fingers and a mouse, and they think it's the most natural thing in the world. But they forget that when people start out in the game, it's not second nature at all. The first time they played with the mouse, they would be looking at the floor, backing into lava, and it's just horrible. But once they get it down, it's the most intuitive, natural way of doing it. So we need to make some things so that new gamers can just enjoy the most simple part of the game that's still fun – moving around, and [engaging in] combat and action, with the minimum controls necessary to enjoy that as a baseline experience. Then allow these other things to be added on top. But it has to be in a layered approach, not an all-or-nothing thing.

"We don't want to do a niche game. We want to do games that are popular; it's nice to have a game that sells a million copies"

Playing to your strengths

Edge: One of the points online gaming guru Brian Moriarty has made about *Quake* and other 3D games is that the characters just don't look very realistic compared to real people. With *Arena* you seem to be addressing that by creating an incredibly lifelike animation system. Will that help bring more people into the game?

JC: I'm quite happy with the character modelling we've got in there – the separate gesturing with the head and the torso. And that's actually a really good example of what we gain from our tighter focus here. I can guarantee you that if we were doing a game that had a storyline and we were going through multiple levels, I would not have had the time to sit down and do that. It would have been too low on the priority list. 'Oh, you only see other players when you're playing deathmatch, which is only part of the game. We've got all this other stuff to do.' Well, when deathmatch is all there is to the game, then we're able to solve that now. And, you know, it's really nice to see



somebody leaning over, for example, and looking where they're aiming. It's a pretty nice benefit.

Edge: It seems every id game has had less and less of a story. Now, with *Arena*, you've abandoned all pretence of a storyline. Is a story something you feel doesn't belong in a game?

JC: I do see the strength of doing a game with a really good story pulling you through. And it's not that the move to multiplayer is any statement that we don't think that having a storyline is a valid way to design games, or that our way is fundamentally better. It's just that as a company we're better suited to doing this type of thing. I still feel sometimes it would be really nice to design a really well-done [story-driven] game. But to do that you have to have stable technology. You really can't do both at the same time, to do something that's extraordinarily creative and technologically groundbreaking. And I think we're always going to be pushing the fundamentals and just doing basics like graphics and networking technology and doing a really good job at that.

Edge: Is it not possible to do both – good technology and good story, good design – at the same time?

JC: There's some interesting points here. Just going by Moore's Law, your power doubles every 18 months. Now, it takes about 18 months to create a game engine. We were able to do *Quake I* and *II* and *Quake: Arena* each in 18 months or less. But if you're setting out with the attitude, 'We're going to do the greatest game ever made, with a great story, great theme, and great new technology,' you're absolutely guaranteeing, fundamentally, that it's not going to be possible to get it done in 18 months. So you then wind up doing your game technology and then doing the game after that. And you'll very likely wind up with a three-year-plus game development cycle.

Look at *Unreal*, which I think has a lot going for it technologically, but there's nothing new, gameplay-wise. Though they did create a really good new engine. Now, if they had said, 'We want to do this spectacularly new type of environment for players and a new theme,' it would have taken them even longer. You wind up saying, 'Is it okay to take five years on a game?' Clearly not, because you start running into these technical design curves. Power's doubling every 18 months, and a game engine is generally going to be reasonable through, say, a factor of four in power, between when it's leading edge and when it's not good enough for people. A factor of four is two generations of Moore's Law, that's 36 months – three years. If you have a game design that takes three years, then by the time it's done, it's practically out of its reasonable technological window. Already, while we're doing the technology that's going to be the most appropriate thing for when we ship, in mid-'99, we've got a pretty clear idea of what changes need to be made to take advantage of the hardware that's going to be shipping a year or two from now.

Edge: So, you're content to focus on the technology and let someone else – Valve, say – take 18 months to design a game?

JC: I do take a good deal of pride in seeing games like Valve's *Half-Life* come out, they've built on our foundation, and they've done a spectacular job. I'm not sitting here kicking myself and thinking, 'We could have done that game.' We're busy doing our games, and they're slightly different now, and I think we do things that best utilise our company's resources. I'm extremely pleased with *Half-Life*. And the funny thing is, it's the one game that we were paying the least attention to. It's interesting, because I think some of the developers in the Dallas area are sitting there going, 'Oh shit.' And we're thinking, 'Hey, we get royalties off this. This is okay.'

"I'm extremely pleased with *Half-Life*. I think some of the developers in Dallas are sitting there going, 'Oh shit.' And we're thinking, 'Hey, we get royalties off this"

Edge: Do you ever have the temptation to walk over to your artists and say, 'Right, today I'm designing a level'?

JC: I know I don't have the right skill set to be a level designer. I could create a level, but it would be more like a drafting operation than a really good creative operation. Just like Tim [Willits, level designer] is not likely to come in here and write the next renderer, I'm not likely to do the next fabulous level. And I'm comfortable with that; it's just being honest with yourself about what your strengths and weaknesses are.

Do not disturb

Edge: Rumour has it that after *Quake II*, because of all the hassle about what you were going to do next, you disappeared and checked into a hotel in Florida so you could program in peace.

JC: That was where I did a lot of my research. I took a stack of SIGGRAPH proceedings and a couple of books and went down there for a week to do research. That was where I actually wrote kind of the beginning of the interface for



stuff and my first voxel renderer for my research phase. And that was pretty useful. I'm considering doing that again for a different reason. All the research ideas are basically done now. There's just a huge amount of work that needs to be done. I'm considering going ahead and taking another week where I can do all of the dynamic interpreter for the client game stuff. It'll probably take me a week of work, and I can do it undisturbed in a hotel.

Edge: Do you take any breaks when you go off and do this? Or do you work non-stop?

JC: I work seven days a week. I work every day that I'm near a computer. It's what I do. Programming is the major motivator in my life. It's what I enjoy. And there are always incredible new areas opening up. It's the thing that I most enjoy. I know that I'm lucky in that, I mean, id is successful because we're talented and hard-working. We're focused enough to see it through. But the lucky part is that I actually enjoy all of this. Because if I didn't like it, I could force myself through and do the games and make money and all that and be successful. But it's just really great that I enjoy what I'm doing. I mean, I still get the success, and we still make a lot of money. But the most important thing is that every day I wake up excited to get in to work and find the next thing and get it done.

Edge: Can you separate John Carmack the programmer from John Carmack the person?

JC: No, not at all. Programming is the central focus of my life. And I make no excuses about it. There's always the time where you have people telling you to get a life, you know, 'Don't spend so much time on this, you should be broader based.' But being well-balanced is overrated; I'm really, really good at what I do. I derive a lot of satisfaction from it. I'm able to push ahead on some new frontiers. And I'm completely happy with it, and I make no excuses for the fact that, yes, all of my life revolves around computer programming.

"Being well-balanced is overrated; I'm really good at what I do. I derive a lot of satisfaction from it. I'm able to push ahead on some new frontiers"

Edge: What would be your optimal work environment?

JC: Being able to stop time and work on whatever I feel like for as long as I can. I mean, I stay in my office, I work every day. And people generally leave me alone. But people do have to come in and interrupt me to work on other things and get opinions and try and fix bugs with other people. And it's a necessary part of development. But I wish I had more time. That's the only thing. I wish I could just stop the clock and insert a few days here and there. Because there's never a time where I think, 'Hmm, what should I be working on?' I look over here [gestures to monitor], and there are probably 2,000 things that I need to do in different areas. It's my 'to-do' list – the random things – little problems, suggestions, and things that could be improved.

Leisure or pleasure

Edge: Do you ever seek refuge outside of games?

JC: I really don't have much in the way of other hobbies. I read a huge amount. I take time every day to read. I usually have a couple of technical books and a couple of nontechnical books going.

Edge: At one point, you were very into fantasy...

JC: In the old days, we used to have the weekly Dungeons & Dragons games and all that. But I got so busy that that was no longer possible, and there's a part of me that definitely regrets that. All of us would spend most of Sunday playing D&D, and I'd spend quite a bit of time preparing for that. But it got to the point where that time is no longer there. And it does sadden me to not have that creative aspect of anything; it could be designing a game or anything. But the time's not there. You just have to realise that you can't do everything, and you just have to set your priorities and then follow them through.

Edge: Priorities like renting out the local airport runway to test-drive your Ferrari?

JC: Yeah. I've spent almost a million dollars on exotic cars. But the great part is that every single day I enjoy them, at least on the ride into work and the ride home. Anything else that I could buy – boats or planes – I would never, ever use. Occasionally we've rented a racetrack or an airport or something. That's not something that you make



buying decisions around. But the cars are something that I can drive every day.

Edge: Do you ever see yourself getting bored of game programming?

JC: That was a big issue early on at id. There was a fear that I would be bored and go off to do something weird in operating systems research or something. When Mark Rein was our president there was actually a discussion about me signing a contract saying I'd stay for a certain amount of time. But it turned out that I've been able to find so many interesting things just in the context of games. Things like all the low-level programming on the consoles, where you're doing everything from the ground up. I retargeted the C compiler to the Jaguar, I've written new linkers, and all the stuff I've learned about networking and different communications things. It's been a lot of fun.

I've been able to cover a lot more ground than I expected. Even right now there are a few major parts of *Quake: Arena* left to do that will be intriguing. But I've been itching to do some vision research lately. It's kind of like graphics in reverse. And that's something that's been kind of tweaking at the back of my mind. But as long as I've got interesting stuff to do in games, it doesn't matter if there's other interesting stuff over there. I'll continue with what I'm doing. If I ever get horribly bored here, then I'll jump off and do some research in some other place.

Edge: Would you ever consider a mundane job like aerospace?

JC: I find that there are interesting problems in all aspects of things like that. Writing missile-guidance systems would be an interesting problem. Yeah, I can find an interest in just about any difficult problem if there are clever aspects to it. **E**

Gallery

The art of the videogame









First seen gracing **Edge**'s November 1998 cover and reviewed this issue (see p76), *Silver*'s distinct gothic style belies its Japanese-influenced RPG fare. Playing as the main character and expert swordsman David (pictured), the game borrows much from the *Final Fantasy* stable. Thus, you are also able to take control of any of David's five companions, who each possess different skills and weapons. The characters' anime-style shoulder-padded armour and gigantic blades might impress, but success ultimately depends on the casting of spells, the effects of which are spectacularly dazzling.

Images rendered by artists **John Lomax** and **Matt Wood** at Warthog Ltd using *Softimage* and *Adobe Photoshop*


Psygnosis



Taking its inspiration from *Gravitar*, *Elite* and *Doom*, Psygnosis' *Lander* is a futuristic, hybrid hovercraft adventure that attempts to wrap up the action in a 'hard sci-fi crispy coating.' While one of your main aims is to earn a sack of cash with which to purchase better lander crafts, your ventures will take you to a variety of detailed and well realised planets.

A great deal of time has been spent improving the graphics engine (originally created for *Sentient*), and the team claims to be especially proud of the realtime lighting and shadow projection effects. The results are certainly impressive.

Images rendered by Psygnosis artist **Carl Dalton** using *Softimage*





AOU '99: SPECIAL REPORT

RHYTHM-ACTION GAMES, SNIPING SIMS AND A WHOLE LOT OF NAOMI IN TOKYO







Thanks to the number of games running on its Naomi board, Sega was the star of the show. Capcom's *Power Stone* proved popular (right, above right)





The latest iteration of Konami's *Beat-Mania* (above right) was a popular draw, while *Zombie Revenge* (top right) was another sterling Sega effort

While last month's AOU show held at the Makuhari Messe exhibition centre in Tokyo lacked AAA titles, it did demonstrate some of the subtle undercurrents within the arcade scene. Overall Sega won most plaudits, thanks to the profusion of its Naomi board and the promise of future software. In contrast, the other big coin-op publishers attempted to drum up enthusiasm with numerous sequels and games that made use of novel control attachments.

The leading genre of the show, inspired by the success of Konami's *Beat-Mania* series, was rhythm-action games, with many companies concentrating on debuting their rhythmic titles. Namco's Atlus-developed *Bust A Move* PlayStation port led the line-up, and although similar to the console version visually, the commands have been simplified. The original's joypad controls have been replaced by four buttons, one specifically dedicated to beating out the rhythm. Two players can compete simultaneously on the twin cabinet setup.

Other music-based titles included Namco's novel *Jumping Groove*, in which players have to jump over rhythm-driven lights, and Jaleco's *VJ* which looks and plays like a poor man's *Beat-Mania*. Konami itself is only beginning to fulfil the potential of the genre it now calls Bemani. Its two new titles expanding on the musical genres of the original *Beat-Mania* were *Drum Mania* and the rock-inspired and self-explanatory *Guitar Freaks*. Impressively, an elaborate version that linked the two cabinets together for a semi-band experience was demonstrated, too. Meanwhile, second-gen titles such as *Pop'n Music 2*, *Dance Dance Revolution 2* and *Beat-Mania II DX* were out in force, the latter's cabinet in deluxe format, featuring a large plasma screen, additional two-way bass-reflex speakers and a bass vibration shaker.



Taito's *Battle Gear* was just one upgrade of a long-in-the-tooth game this year









***Bust A Move* (left) proved popular, but not as much as horse race sims (above)**





Sega's *Airline Pilots* was one of the more desirable titles. Each of the cockpit screens is run by one of three linked Naomi boards

After the explosive power of *Ferrari 355* (see News, p13) and the much-anticipated *Crazy Taxi* (see p32), the other surprise package of the show was another Sega title: *Airline Pilots*. This three-Naomi-board game is a realistic commercial flight simulator title running in a high-end three-screen cabinet. A training mode with onscreen instruction is provided, as well as a normal flight mode.

Generally, simulation titles were out in force everywhere. Ranging from the bizarre to the ridiculous, Taito demonstrated its radio-controlled car sim *RC de Go!*, while Namco concentrated on watery activities with *Angler King* and *Submarines*. However, the most striking sim was Konami's *GoldenEye*-inspired *Silent Scope* sniper game. Quite what western public opinion will make of it is another matter altogether, so don't expect its arrival in an arcade near you too soon.

KONAMI

A PHYSICAL MIXTURE OF DANCING AND SHOOTING

In a radical break from the mass of rhythm-based games it had on display, Konami also introduced the slightly sombre sniper sim *Silent Scope*. According to the accompanying brochure, the justification of the game is that you must take on the role of a sniper who saves the community by shooting vicious criminals. Using a new style of gun controller developed by Konami's R&D labs, the player views the action by looking through the 'telescopic' sight mounted on top of the rifle. Within this site there exists a tiny screen which 'magnifies' the action evident on the full screen. Once the enemy is picked out, it's simply a question of picking him off using the minimum amount of ammunition. This hugely novel effort from Konami offered three play modes: training, story and time attack.



Konami demonstrated the pinnacle of coin-op interfaces with *Silent Scope* (above) and *Dance Dance Revolution 2* (right)







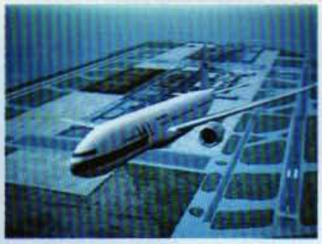
SEGA

NAOMI STEALS THE SHOW

After the success of the train-based *Densha de Go!*, commercial simulation seems to all the rage in Japan. Sega has significantly raised the stakes, however, with the help of national airline JAL, and the result is flight sim *Airline Pilots*. The three-screen cabinet provides a real cockpit environment, with an array of switches and levers for the control of engines, flaps and undercarriage. Two basic modes are offered: a five-level training and full flight mode.

Sega's two fighting titles, *Spikeout* and *Blood Bullet*, were also revealed in upgraded form. The fourplayer *Spikeout* has become *Spikeout Final Edition* with two new stages added along with additional bonuses and combos. *Blood Bullet* (aka *Zombie Zone* in the west) was retitled *Zombie Revenge* at AOU. Running on a standard Naomi cabinet with simultaneous twoplayer gameplay, the RPG/fighting game pitches three different characters against the living dead.

Two other games, Tecmo's *Dead or Alive 2* and Treasure's *Gun Beat*, were also on show, although only on video. Labelled an 'action-racing' game, *Gun Beat* mixes a colourful arcade style with offbeat gameplay. Four main characters are available, each of which has a special vehicle or animal to ride around a race circuit, while shooting at each other. It's expected to be multiplayer. *Dead or Alive 2* is similar in style to Tecmo's original beat 'em up, although a tag-team option has been added and the level of character movement has been improved.








***Airline Pilots* (top) brought realism to flying games, while *Zombie Revenge* (left) provided bloody action. Treasure's *Gun Beat* (above) was a bizarre racing title**

CAPCOM

MAINTAINING THE BALANCE BETWEEN 2D AND 3D ACTION

Despite the fact that *Power Stone* is available for Dreamcast in Japan, Capcom attempted to enforce a 'no pictures' policy on its stand. With little else on show, the 3D beat 'em up dominated the stand with over 20 units available to play. The arcade version isn't far removed from the consumer incarnation (see p70), so it looks and feels just as glorious.

The 3D nature of *Power Stone* aside, Capcom remains committed to its old series and so rolled out the latest version of the *Street Fighter* series, *SF III 3rd Strike: Fight to the Future*. A total of 19 characters are available: 15 from the previous game plus four new characters – Makoto, Remy, Twelve and Q the Unknown. The game also has a new graded judging system to evaluate fight content.

The third title on display was a classically styled 2D shoot 'em up, *Giga Wing*. While not a particularly innovative take on a well-loved genre, *Giga Wing* is beautifully designed, with plenty of weapons and enemies to choose from. One novel feature is the Reflect Force power-up which bounces back enemy shots.



With the likes of *Street Fighter III 3rd Strike* (far right) and the vertical scrolling *Giga Wing* (right), Capcom is keeping the faith with its traditional 2D environment. The 3D nature of *Power Stone* (above) shows the company's progress, though






NAMCO

TOO MANY SEQUELS, NOT ENOUGH INNOVATION

Disappointingly, the bulk of Namco's titles had already been displayed at ATEI (see **E**69). The likes of *Final Furlong 2*, *Bass Angler*, *Point Blank 2* and *500 GP* didn't make up for the lack of Naomi games or any hint of *Tekken 4*. Of these games, only *500 GP* looked half decent. Running on System Super 23, it continues Namco's development of the bike genre with motorcross. Licensed by the FIM, it features real bikes from Yamaha, Suzuki and Honda as well as professional riders. Strangely for an arcade game it avoids use of check points and time extensions, allowing players to complete a course before seeing if they have qualified.

It was left to *Submarines* to inject some much needed excitement into proceedings. Upgraded from the classic '80s title, it's played through a small screen fitted within a moveable periscope – a larger external screen is provided for onlookers. Targets are detected either visually or sonically and then dispatched with a swift salvo of torpedoes. Although sporting some of the simplest graphics of any game at AOU (not wholly surprising considering it runs on System 12), *Submarines* proved to be one of the most popular games with visitors throughout the duration of the show.












***Final Furlong 2* (left), *500 GP* (far left) and the popular *Submarines* (top)**

TAITO

RACING CARS, RADIO-CONTROLLED CARS AND YET MORE PUZZLE BOBBLE

Continuing the simulation theme, Taito showed off its quirky *RC de Go!* title: a radio-controlled-car sim. Realism levels are high throughout the game, with graphics and handling close to what would be expected from the real hardcore hobby itself. Taito has designed a special trigger controller identical to those used with RC cars and the viewpoint is three-quarters to boot. Various different modes are offered, including both off- and on-road, and five course are provided for each mode. Multiplayer games between linked cabinets is another promising option that should satisfy fans.

Also on the stand was the current *Puzzle Bobble* offspring *Super Puzzle Bobble*, and *Battle Gear*, the latest version in Taito's long-running racing series. A total of 21 cars from a variety of Japanese manufactures can be chosen, and Taito has also added a new time-attack mode and various environment effects such as weather and time-lapse. The instrument panel has been tidied up, too, bringing the overall feel of the game closer to the *Ridge Racer* series.







One of the more interesting games on display, *RC de Go!* (far left) simulates model car racing, whereas *Battle Gear* (centre) recreates the real thing. Quite how follow-up *Super Puzzle Bobble* (above) was dreamed up is anyone's guess, however

CASTLEVANIA

One of the longest-running game series in existence, Konami's *Castlevania* has transcended a raft of classy platforms, but it's the first SNES incarnation that many hardcore fans will remember as representing the pinnacle of the concept





The introduction of a more capable whip brought with it some significant gameplay enhancements (right). Mode 7 effects (below), meanwhile, ensured that this *Castlevania* looked like no other that had preceded it, and new projectile weapons (below right) gave players fresh artillery with which to take on Dracula's might





If, like action movies, videogames should open with a bang, then *Castlevania IV* must be considered a failure, its opening stretch of gameplay running, as it does, at a painfully pedestrian rate. But then the *Castlevania* series has been about extreme pace, preferring instead to focus on finesse, depth, sprawling maps, and, perhaps above all else, atmosphere.

And the first SNES instalment of the legend (following various arcade, NES, PC Engine and Game Boy interpretations) remains possibly the most atmospheric of the lot because, despite lacking the full-3D environments of the new N64 version (see p74), it had a soundtrack whose quality belied its chip-generated nature. With grand orchestral compositions laced with subtly simulated brass and woodwind melodies, *Castlevania IV*'s score has garnered a reputation among game-music aficionados as a bona fide classic.

Audio accomplishments aside, though, Konami's platform-based actioner shines as an example of engrossing videogaming (once it gets into its stride, that is). Released at a time when the Japanese softco was producing its best work for Nintendo's 16bit machine (including the likes of *Super Contra* and *Axelay*), *Castlevania IV* brought a new



concept to the established gameplay traits of the series: a whip which could not only be used to dispatch assailants but also lashed on to environmental fixtures, allowing hero Simon Belmont to swing across deadly drops, Indiana Jones style.

Enemy characters arrived in pretty much stock *Castlevania* format, with swooping bats, spindly skeletons and, of course, the mighty Dracula himself in the climactic battle. If the game's adversaries were familiar, however, the Super Nintendo's technology ensured that Konami was able to present a game world offering surprise upon surprise, with Mode 7 effects generating vertically 'spinning' tunnels, enormous swinging chandeliers, and even rotating rooms.

While the pseudo-sequel *Symphony of the Night* may be a deeper and more well-rounded title, *Castlevania IV* takes a place in history as one of the most magical games of the 16bit era.





Publisher: Konami | 1994 | Developer: In-house | SNES

EDGE VIEW

The videogames world never stands still, riding the breaking wave of advancing technology. In this regular column Edge puts the industry's progress in perspective with a look at yesteryear's headlines: five years ago this month



Edge issue seven, April 1994



Namco's three-screen version of *Ridge Racer* premiered in the UK at the 50th ATEI show

With CD-ROM still something of an unknown quantity, **Edge** reports on a second version of Sega's forthcoming Saturn, a cartridge-only machine designed to undercut Sony's rival 'PS-X'. Ambitious polygon counts pitch the Saturn's output at around 900,000 per second, a figure that would prove slightly awry from reality.

Elsewhere in the issue Pioneer's LaserActive technology is unravelled, a fanciful attempt to create an interactive standard based around LaserDisc players. Highlights of the system include plug-in Mega CD modules and a consumer-friendly $1,200 price point. Meanwhile, **Edge** questions the future of PC gaming as Sony and Sega's new polygon pushers wait in the wings. However, an 80MHz Pentium chip could hold the answer…

The 50th Amusement Trades Exhibition International in London falls short of expectations, with most of the big new titles seemingly held back for Tokyo's AOU show the following month. A period of dominance for specialised hardware is – rightly – predicted, sounding the deathknell for old-school, plug-and-play PCB games. It takes over four years for Sega to pick up the ball again with its current Naomi system.







***Daytona* (top) looked basic at its ATEI debut in '94. At the same time, Jez San (left) was similarly fresh-faced. LaserActive title *Vajra* (right)**

Did they really say that?

Darryl Still, marketing manager at Atari : "All the [Jaguar launch] problems were caused by the immensely positive way that the product was received by the consumer"

Did Edge really say that?

'If only you could talk to these creatures, then perhaps you could try and make friends with them,' concluding its review of *Doom*

Testscreens (and ratings)

Doom (PC; seven), *Ridge Racer* (Coin-op; eight), *Super Darius II* (PC Engine; six), *Super Puyo Puyo* (SNES; seven), Scavenger 4 (FM Towns Marty; seven)

PIXEL PERFECT

Every gamer has occasional moments of sparkling excitement, be it the first time *Speedball* booted up, or completing *Sabrewulf*. High-profile gamers are no exception. Here, Relic Software's Alex Garden reflects on a 'great 3D action game'

"I remember when I used to download every game I could find for my 386. I remember all these great 2D side-scrollers, top-down dungeon crawlers, and every other 2D thing you could think of. I also remember seeing a 10.2Mb file hiding on some obscure BBS somewhere called 'WOLF3D.ZIP'. I'd never heard of this game, and I'll never forget the description: 'a great 3D action game.'

Wolfenstein 3D was the defining moment of my life. It taught me that there was tons of room left for innovative ideas, and that greatness comes from challenging what everyone else says is impossible. No singular title since then has changed the industry in such a dramatic way."



Downloading the innovative *Wolfenstein 3D* on his 386 home PC was a magic moment for Alex Garden





Sony PBD-V30 DVD Discman

Contact: 0990 111999

On the surface, Sony's PBD-V30 DVD Discman seems a pretty tasty little device, enabling you to watch movies on the move. But look closer, and you begin to wonder what else it can offer. The V30 does kick out some impressive sounds, supporting both Dolby Digital and MPEG 5.1, although the motor noise machine, mainly thanks to its cheap-looking plastic casing, annoys. Picture quality-wise, there isn't much to gripe about, save a minute amount of extra picture noise.

Sadly, when compared to Panasonic's impressive equivalent (the DVD-L10) Sony's offering seems the poor relation. The lack of a built-in screen, unless you happen to lug a telly around with you or fork out for Sony's own Glasstron movie-viewing glasses, is an acute drawback. Plus, while the Discman itself is pretty easy on the eye, the same can't be said of its hefty battery pack which lasts up to two hours, or the very chunky black remote control. A fine idea, but one that needed more time on the drawing board.





Panasonic NV-EX1B MiniDV Camcorder

Contact: 0990 357357

Yet another MiniDV camcorder makes its debut here in **Edge**, indication perhaps of the growing trend for aspiring film-makers and keeping 'You've Been Framed' in business. Promising glorious home movies from smaller and smaller kit, most manufacturers are now packing in a host of gimmicks to lure the money from your wallets, while others, such as this NV-EX1B, rely on simple reliability and ease of use to win you over.

The camera has the standard 2.5-inch LCD, 16bit stereo and a tiny remote control. Playing back your movies, or recording them onto standard VHS, is as easy as slapping the NV-EX1B into its docking station – which includes IEEE1394 interfaces for PCs – and the results are everything you'd expect from miniDV. Rich, crisp pictures and a crystal-clear soundtrack are thankfully not accompanied by any motor noise.

A cinch to use, the NV-EX1B sits easily in your palm with all the main controls resting under your thumb. In fact, gorgeous though it may be, the camera's diminutive size is its one big drawback. The thumbwheels and buttons are too fiddly, and until you get used to its dimensions your shots could be obstructed by nice close-ups of your fingers as they stray over the lens.

* These are typical High Street prices; accurate at time of going to press. Manufacturers are no longer obliged to provide recommended retail prices on certain consumer electronics products.

400MHz Macintosh G3

***£2,385 Contact: 0800 783 4846**

First impressions count, and Apple's new G3 (see **E**68) is definitely striking, although the semi-opaque finery won't be to everyone's taste. Beauty is, of course, only skin deep but under all that polycarbonate, the G3 is a wonder. Its 400MHz injection makes the Pentium II look like an asthmatic tortoise, while a 9Gb hard drive, 128Mb of RAM, built-in ATI RAGE 128bit graphics card with 16Mb Video SDRAM and accelerated *QuickDraw 3D* plus OpenGL for gaming, make this one heavyweight machine. Learning from past mistakes Apple has also made room for upgrades to 100Gb hard drive space and a gigabyte of RAM, and certain models even include a DVD-ROM drive. Best of all, the days of struggling to unplug are long gone. Even when the G3 is running, a yank of a lever will neatly open the side panel so that you can fiddle away to your heart's content.

Of course, it's not all roses. While the G3's connectivity is excellent, incorporating IEEE1394 and USB sockets, the lack of any real AV ports means you'll have to splash out on USB and IEEE1934 adaptors. Moreover, the iMac mouse and keyboard which can be partnered with the new G3 are quite frankly ridiculous for anyone wanting to use the computer for anything more than a multimedia machine.





Harman/Kardon Take Control Universal Remote

***£300 Contact: 01908 317707**

Universal remote controls may seem an answer to the prayers of those fed-up with stacking system silliness, having to root out six different handsets just to be able to watch a movie. Often, though, these remotes are capable of controlling the main operations, such as cranking up the volume, but can't handle programming the video.

Well, get down on your knees and thank Mr Bill Gates for the Microsoft Software-based Take Control Universal Remote. The touchscreen display means you're never limited by the number of buttons and if you can't find your gear in the hundreds of preprogrammed models, you simply shoot the infrared signal from the original remotes into the back of the Take Control to 'teach' it.

Best of all, however, are the macros, programmed via your PC, which group together a number of commands to one button. Watching the latest DVD is as easy as slipping a disc into your player and pressing the buttons that *automatically* switch on the TV, select DVD on the amp, makes sure that the volume setting is at 12 and brings up the opening titles. Bliss.



Edge has attempted to state prices wherever possible, but for up-to-the-minute information, check adverts in the national press or contact your local consumer electronics dealer.

Shooting fish

Japan: Sega has unveiled the latest batch of Dreamcast peripherals specifically designed to accompany a clutch of eagerly anticipated titles due for Japanese release in the coming months.

Perhaps the most mainstream member of the new add-on range is a lightgun which will be launched to coincide with the conversion of the *House of the Dead 2* coin-op. Distinctly 'snub-nosed' in style, the peripheral is the first lightgun to incorporate a D-pad, while also featuring a VMS port, but apparently no recoil action. Technically, at least, Sega's new shooting add-on looks to be the most complete example ever.

The company's fishing-rod controller, meanwhile, will allow DC owners the perfect interface for the forthcoming conversion of *Get Bass*. Peripheral company ASCII may yet trump Sega in the authenticity stakes, though, with its own new DC add-on – a specialised controller for the home version of *Airline Pilots* (see Arcadeview, p118), due later this year.



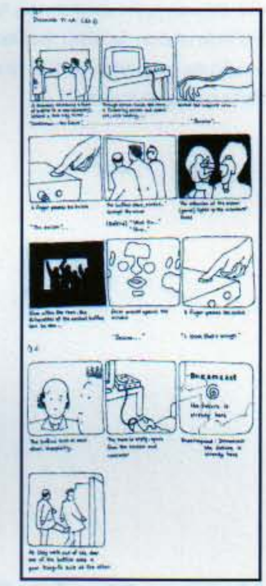




Sega's new lightgun may look funky, but it can't match the Dreamcast's fishing controller in the strive towards authenticity

Dreamcast compo result

UK: The response to the competition which appeared in the Dreamcast supplement accompanying **E**67 was nothing short of astonishing, revealing a dazzling amount of creative energy and talent among **Edge**'s readership. The victor is Darren Mitchell of Rochester, Kent, and he'll soon be the recipient of a Dreamcast, steering wheel, two joypads, two arcade sticks, two VMS units, plus *VF3tb*, *Sonic* and *Sega Rally 2*. Thanks to everyone who entered.



Darren Mitchell's winning entry: clever, commercially viable, and with a sense of humour to boot

Clear differences

Japan: A further part of avant-garde game designer Yoot Saito's (see **E**67's supplement) plans for Dreamcast has become – literally – clear. Saito-san's out-there themes and concepts for interactive entertainment (including a bizarre talking-fish A-life project) are now joined by his own interpretation of Sega's 128bit console.

Intended to form a part of a limited-edition bundle with Saito's forthcoming *Sea Man* title, the transparent Dreamcast (inexpertly photographed by **Edge**'s own fair hand) is an odd prospect. But if Nintendo can do it to the Game Boy, then why not?



Now you can finally see the machine's water-cooling system at work. No? Try *really* squinting...

Sega's colour clash

UK: At first it was believed that Sega decided to change the colour of its European Dreamcast logo from orange to light blue purely on a whim, but it has since been claimed that little-known software publisher Tivola had brought its might to bear upon the company, claiming that the proposed branding was too similar to its own well-established identity (below). Rumours suggest that the Japanese giant bowed to pressure, leaving European consumers with a rather less striking interpretation of the swirl that has become synonymous with the Dreamcast brand. Here's hoping a company already proudly sporting a blue swirly logo isn't lurking somewhere...

Tivola
ELECTRONIC PUBLISHING

Philips' visions of the future

Europe: While most hi-tech companies realise the future is going to be, for want of a better word, wired, few have approached it with the determination and poise of Philips. The Dutch giant set up a taskforce to investigate the impact of emerging technology on society. The result is its conceptual 'Vision of the Future' range. Covering a raft of different applications from domestic to public and workplace tools, it seeks to integrate the next generation of mobile, hyper-connected gadgets smoothly into modern life. For if there's one thing that sets this blueprint apart from the usual corporate projects, it is its emphasis on soft, tactile technology. Colours are pastel, corners rounded and shapes organic. The emphasis on all-singing, chromium gizmos is long gone. Instead, these objects are unintrusive; crafted, not manufactured. There is even a sub-set dealing with improving the emotional ebb and flow of life. One concept enables you to send egg-sized units with integrated visual and audio messages of love and devotion. Apparently, the future will not only be bright, but beautifully shaped, too. More details: www.philips.com/design/vof/

If you didn't guess, these images aren't to scale…



DVD Competition

UK: Edge's appreciation of DVD movies has been well documented over the last few issues. The format seems a strong contender to usurp the VCR's dominance of the mass-market – at least once the recordable DVD machine becomes a realistic proposition.

In the meantime, for under £200 VideoLogic is now offering a DVD Player card bundled with a high-spec Hitachi DVD-ROM drive. Complete with Dolby Digital 5.1, normal stereo and S-Video outputs, the system is capable of playing back either on your PC screen or television. And because of the low signal loss inherent in S-Video cables, you don't need to stack the PC next to your television set. The other bonus is that the driver software asks which region you're resident in when you install. **Edge** clicked on a European '2', of course…

VideoLogic has kindly offered **Edge** readers the chance to win three of its DVD Players complete with Hitachi drives. To win one, simply send an answer to the following question to the **Edge** office by April 21 '99:

Which DVD region code does Japan fall under?

*Mark your entry 'DVD Compo' and send to **Edge**, 30 Monmouth Street, Bath, BA1 2BW. Please include a daytime contact number. Usual rules apply.*



Turn your PC into a 'multimedia machine' in one easy(ish) step

Rayman turns on the telly

France: Using graphics packages such as *3D Studio Max* and *Photoshop*, designers and animators at UbiSoft are in the process of creating a Rayman cartoon which the company plans to air on television in the US, Asia and Europe (including the UK) by late 2000. The two-minute pilot recently revealed to **Edge** showed impressive attention to detail, although the characters lack the charm of those featured in the likes of 'A Bug's Life'. Now, how about something a little less twee?







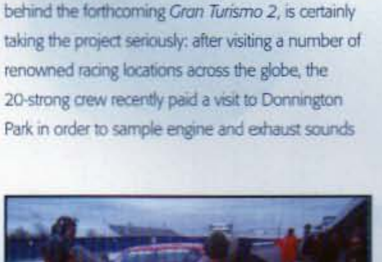


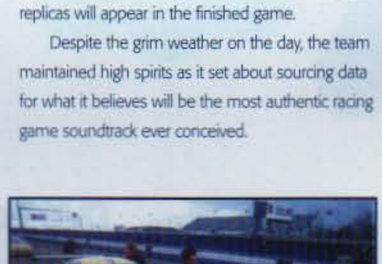
Thirteen half-hour episodes are in production, and UbiSoft plans to re-use elements for future games

Exhausting work

UK: Polyphony Digital Inc., the Japanese team behind the forthcoming *Gran Turismo 2*, is certainly taking the project seriously: after visiting a number of renowned racing locations across the globe, the 20-strong crew recently paid a visit to Donnington Park in order to sample engine and exhaust sounds from a selection of GT-spec vehicles of which digital replicas will appear in the finished game.

Despite the grim weather on the day, the team maintained high spirits as it set about sourcing data for what it believes will be the most authentic racing game soundtrack ever conceived.









It's all in the details, evidently, and the Polyphony team has been sticking mics into all the right places

DataStream

Percentage by which Japanese household spending fell in 1998: **1.8%**
Amount of money that Japanese Government is giving away to teenagers and OAPs to encourage consumer spending: **£3.6b**
Number of Dreamcasts Sega expects to have shipped in Asia by 'the summer': **2m**
PlayStation's share by volume of the top 50 selling next-generation games sold in US during 1998: **73%**
Average number of games owned by PlayStation users in the US: **7**
Total retail sales of console software in the US during 1998: **$5b**
Total retail sales of PC games in the UK during 1998: **£199m**
Percentage of US console market taken by N64 in 1998: **28%**
Percentage of Japanese console market taken by N64 in 1998: **7.5%**
Percentage of Japanese console market taken by Dreamcast in 1998: **4.6%**
Percentage increase in UK year-on-year sales over the Christmas period at Electronics Boutique: **11%**
Percentage decrease in UK year-on-year sales over the Christmas period at GAME: **4%**
Number of copies of *Gran Turismo* sold worldwide: **6m**
Revenue generated at retail in the US by *Legend of Zelda* after six weeks: **$150m**
Revenue generated at the box office in the US by 'A Bug's Life' after six weeks: **$114m**
Amount Mr and Mrs Gates donated to Gates' foundations for health and educational work: **$3.3 b**
Damages awarded against anti-abortion Website, The Nuremberg Files, for listing the names and addresses of doctors: **$107m**
Number of copies of *GoldenEye* sold, making it the biggest-selling videogame in the US last year: **2.1 m**
Number of years Yamauchi-san will have been president of Nintendo if the rumours of his impending retirement in 2001 are true: **51 years**

Seeing coloured bubbles

Japan: Puzzle games might well have been *invented* for Nintendo's Game Boy, and yet apart from *Tetris* there have been few other timeless exponents of the genre. The advent of the colour iteration of the system, however, means that Taito's new *Bust A Move* title seems set to join Alexey Pajitnov's finest in the GB hall of fame. Yes, it's been available in mono for a while, but have you actually *tried* playing that infernal version with a hangover on the train? Exactly.





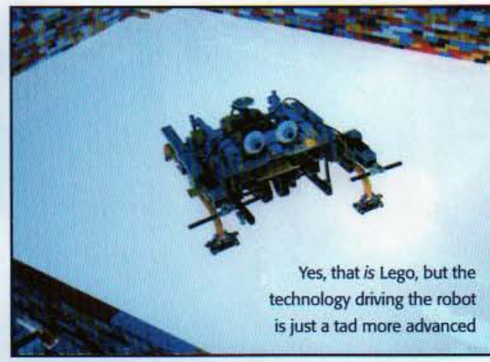


Robot wars

Japan: From January 29 to March 22, the Opera Tower in Nishi-Shinjuku played host to the (deep breath) Co-habitation With The Evolving Robots (Organised by Intercommunications Center) event, which showcased developments in the field of computer-enhanced automatons of both the bizarre and the banal variety. Although only loosely related to the kind of technology **Edge** readers will be accustomed to, the show was an ample demonstration of the Japanese obsession with pushing technology in directions others fear to tread.



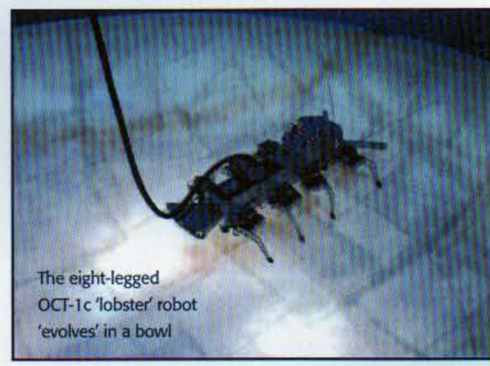
WABOT 2 can actually converse with humans, and play an electric organ – using both 'hands' and 'feet' – by reading sheet music



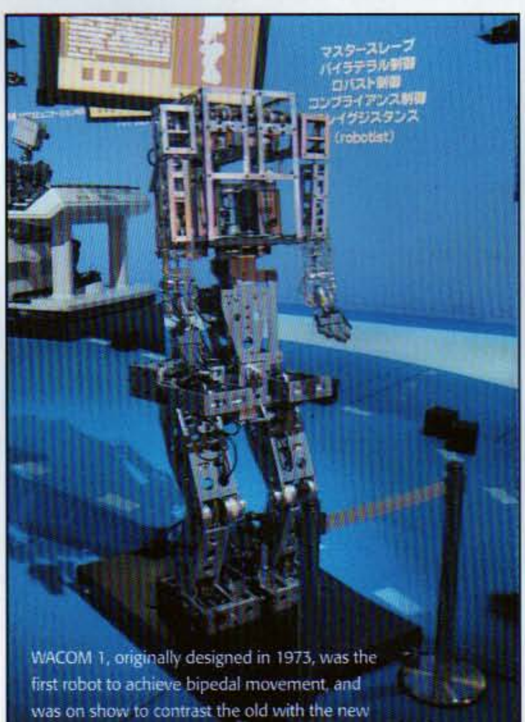
Yes, that *is* Lego, but the technology driving the robot is just a tad more advanced



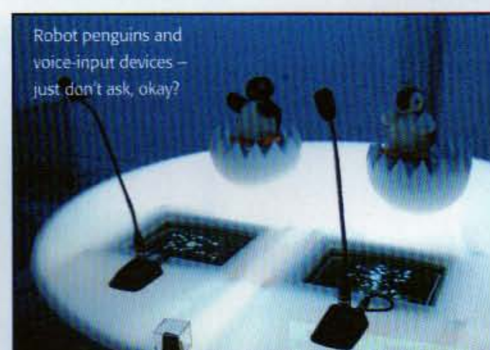
The Atom Car: insert ¥100 and its built-in geiger counter will monitor your trip for radiation



The eight-legged OCT-1c 'lobster' robot 'evolves' in a bowl



WACOM 1, originally designed in 1973, was the first robot to achieve bipedal movement, and was on show to contrast the old with the new



Robot penguins and voice-input devices – just don't ask, okay?



Many pieces of work were non-interactive, but some encouraged a bit of hands-on

(out there) MEDIA



ROGER ENO/LOL HAMMOND
Damage
(All Saints)

A collaboration between the ubiquitous Lol Hammond and Roger Eno, brother of Brian. While Eno is classically trained, Hammond has done everything from raging techno (in Slab) to retro electro funk (Girl Eats Boy). Needless to say, 'Damage' is not your average floor-filler. Instead it resembles a soundtrack, slow beats and cool reverb alongside languid string and piano arrangements – not a million miles away from Massive Attack's mellower, rap-free moments.



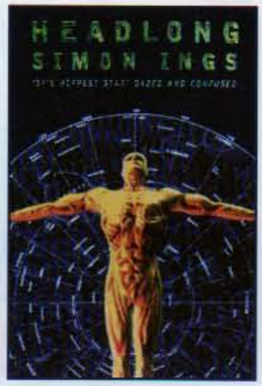
JAMES HARDWAY
A Positive Sweat
(Recordings of Substance)

Hardway is nothing if not energetic. Incredibly this is his third album, and once again the sound has matured. Maybe it's the work he's done scoring underground movies, or perhaps he's simply learning how to graft those flashy drum'n'bass techniques onto more acceptable song structures. Whatever, the jazz indebted tracks come ready packed with more mainstream melodies, and vocals are provided by the appropriately ethereal Amanda Ghost. The result sounds like some Vegas-tinged 808 State – which is not something to complain about.



CONEMELT
Sticklebrick City
(ill)

Forget the comedy names, 'Shall We Showaddywaddy', 'Wide Bertha' and 'Right Potato', and wallow instead in a sound apparently created using a smart mix of live playing and studio tinkering. It's an approach that pays dividends, giving this, Conemelt's fourth album, a solid identity, and one that's as willing to rope in dancefloor-friendly beats as space-age Detroit techno. On the strength of this, Conemelt could be interfering with a lot more speaker equipment very soon.

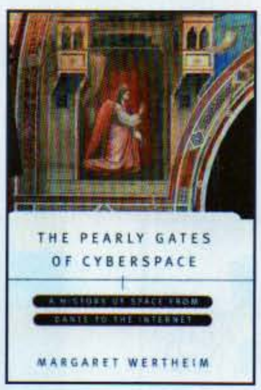


Author: Simon Ings
Publisher: Voyager
ISBN: 0 00 6477259

HEADLONG

The sexiest concept in philosophy, Descartes' splitting of the mental from the physical has provided much fuel for cyberpunks. Today, the idea that the brain is purely a storage unit has become so conventional that to think otherwise is blasphemy. *Headlong* thus revolves around the abilities of the brain and the effect they have on the whole organism – specifically the loss of sensory ability.

Suffering withdrawal following the removal of the equipment hardwired into his brain while a lunar architect, Chris Yale's return to earth is riven by epistemic appetite imbalance. Life is a grey numbness – a situation not improved by the news that his similarly afflicted wife has been found with her skull split open. Dodging the attentions of a neo-police state and double-crossing brainware dealers, he attempts to find out what happened, and Ings manages to twist the clichés with a deft brutality. The thinness of the writing style is compensated by the subtlety with which he handles the atmosphere, too. The plot may be a cipher for deeper issues of post-human existence, yet it engages enough to keep interest flowing.



Author: Margaret Wertheim
Publisher: Virago
ISBN: 1-86049-527-3

THE PEARLY GATES OF CYBERSPACE

Ever since Apple created the position of chief evangelist, the parallels between the computer and religion have been growing. Both draw their power from bodiless experiences producing feelings of ecstasy, far removed from the drudgery of everyday life. The similarities have been strengthened by the work of authors such as Gibson and Coupland, who draw on both traditions as they flesh out the moral implications of our post-human living space.

Small wonder, then, that emerging cyberguru Margaret Wertheim's follow-up to her study of science, religion and feminism goes straight for the jugular. Subtitled 'A history of space from Dante to the Internet,' it's a serious piece of theory. And, as often seems to be the case with such books, its opening trawl through historical thought is the most interesting part. Man's relationship with space, argues Wertheim, fundamentally defines his identity within the universe. Western civilisation's increasing focus on the material over the spiritual has resulted in an unbalanced mindset. Yet unlike many commentators she is uncomfortable with the rewards it offers. Her bottom line seems to be: cyberspace may be a cool place to hang out, but you wouldn't want to spend eternity there.







INTERNET
Site: *R4* official US page
URL: www.namco.com/athome/titles/r4/start.html

Shocked up to the eyeballs, Namco's international Website for PlayStation hot property *Ridge Racer Type 4* is an online treat. Packed with game-related info, from course maps and screenshots to car specs and team bios, the music-backed site is a fine piece of interactive entertainment in its own right. There's even a set of animations depicting the correct method for powersliding through corners. And to top the package off, Namco has thoughtfully included a *Win95* screensaver.

VIEWPOINT

EXPRESS YOURSELF IN **EDGE** – WRITE TO: LETTERS, **EDGE**, 30 MONMOUTH STREET, BATH, BA1 2BW (email: edge@futurenet.co.uk)

While I respect Gary Penn's knowledge of the games industry is superior to my own, some of the issues he raised in your interview with him [**E**69] did seem a bit puzzling. He claims that the industry needs more structure and commercialism; I would have thought that the opposite is true. Surely we have seen too many average and unoriginal games, where profit is the sole intention of both the publisher and developer. Creativity needs to be encouraged, not stifled.

In my opinion game designers are artists – who would deny someone like Miyamoto that title? Yet there is no way that you could give any artist a tight budget and strict deadlines, and still expect credible work. Most of the best games these days require a huge budget, and years of development time.

Nabil Hanafi,
via email

Time is a prerequisite to development, of course, but bumbling around blindly, without proper planning and a carefully considered project structure, is simply counterproductive, which is what **Edge** understood as being Gary Penn's point.

I don't know if I'm about to state the bleedin' obvious, or if no one else has ever thought of this, but Sony isn't actually against the principle of piracy. Indeed, it has been producing devices whose sole purpose in life is to make illegal copies of sound recordings for years, and it is now manufacturing devices that could quite easily be adapted to make copies of PlayStation games.

As a musician, I have long wondered about the hypocrisy of the computer anti-piracy movement. How many Microsoft employees can honestly hold up their hands and claim never to have copied a record or taped a gig? Well, how about videoed a TV programme and filed it away for future viewing?

I'm not against people watching something they've timeshifted a couple of times before deleting it, and I'm not against people taping their favourite tracks to listen to in the car (I do both myself), but copying someone else's record, or taping 'Fawlty Towers' instead of buying the video/laserdisc is breaking the same law that FAST uses to prosecute software pirates.

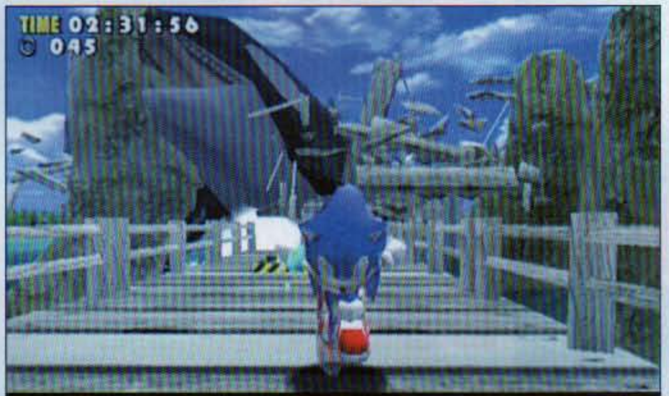
So, is there anyone at **Edge** Towers who can hold up their hands and look innocent?

Deke Roberts
Boss Radio, Oxford

A quick show of hands around the **Edge** office confirmed that, yes, taping from television broadcasts is a common practice. Call the police.

'I have long **wondered about** the hypocrisy of the computer **anti-piracy movement.** How many Microsoft employees can honestly claim **never to have copied** a record or taped a gig?'

It's recently struck me that, although emulation is probably good for both gamers and the developers of the original games (raising developers' profiles, allowing new gamers to experience otherwise unavailable classics, etc), it might not be such a good thing for the start-up shareware games developer.



Pierre L is of the opinion that **Edge** perceives *Sonic Adventure* to be 'just above average', while Stephen Mackintosh believes the verdict to be more like 'pathetic'

Many shareware developers begin by writing a version of an established 2D classic on their platform of choice, then gain some confidence and maybe some capital before embarking on more ambitious projects. But due to the prevalence of emulation, with the original games playable at their full or faster framerates, shareware authors will either not bother writing their clone, or will not have a market for it if they do.

Who is going to bother writing from scratch another *Pac-Man*, *Galaxian* or *Asteroid* variant on the PC/Mac when the originals are now fully playable? Who will even consider downloading the game or copying it from a magazine cover CD, or bother to pay the $10 shareware fee?

A good example of this I believe is with the Psion Series 5 palmtop. A powerful machine, it can run thousands of ZX Spectrum games (and even some old DOS ones) under emulation. At present, though, there are virtually no decent shareware games for it. Emulation has upped the stakes for the starting-out games developer and has made their otherwise acceptable efforts obsolete.

Phil Gooch,
via email

Some fair points, but surely the root of the problem lies with shareware coders themselves. Rather than simply producing blatant clones of the likes of *Asteroids*, shouldn't they be concentrating on improving upon the original umpteen-years'-old concept? Anyone can copy. Innovation should be a significant consideration to start-up coders.

What has happened to **Edge**? It seems that you have changed your once-honest views and opinions since the demise of Sega's Saturn and have gained a rather comfy bonding with Sony and Nintendo. Since the release of the Dreamcast, the software you have reviewed to date received just above average marks, in particular *VF3tb* and *Sega Rally 2* – all you

seem to do is criticise the game's graphics and other irrelevant minor matters. For *Sega Rally 2*, the first thing you do is blatantly slag off that it's not arcade perfect and that it suffers from slowdown – yes, it is true, but only to a certain degree – but these factors are not overly relevant (if at all) to the all-important factor: *gameplay*. Of all the racing games I've played (trust me, I've played a lot!), *SR2* is the most demanding and technically accomplished racing game to date. What right have you to say that *SR2* seems rushed? Yes, it was delayed since its initial release date – the reason was obviously network play and of course the improved graphics. You criticise too much and don't or cannot appreciate the more important points. Remember that the Dreamcast is still in its infancy with first-generation titles – give it a chance!

A few years ago you reviewed *SR1* and *VF2* on the Saturn and they received the marks they so rightfully deserved: 9/10. Were these not first-generation titles too? So why give their superior sequels only 8/10? It doesn't make any sense. Speaking of reviews, how many reviewers do you actually have reviewing games?

Further to this point, I feel that the Dreamcast (and Sega) is once again being badmouthed, especially by you, **Edge** – examples being the cover of issue 69: 'PlayStation 2 Dreamcast 1'; page 3 of the same issue: 'Sega's Japanese launch came and went without the hysteria that was expected from the appearance of such a capable piece of technology'; and so too p13: 'With Sega's move now made and Dreamcast yesterday's news'. All this seems to be very immature and worrying to me from what was once a well-respected and well-opinionated games magazine. I've been an avid gamer since the early '80s, I own a PlayStation, N64 and Dreamcast, and I've been a reader of **Edge** since it was published from day one, but something has changed. Maybe it's just pure propaganda? Well, that's definitely the impression that me and many others have. Can you, **Edge**, prove us wrong?

Pierre L,
via email

What right does **Edge** have to call *Sega Rally 2* rushed? Well, only in as much as the info came from an inside source.

Anyway, moving on to an even happier Sega fan...

Oh dear! It's seems that even **Edge** cannot escape the hype created by the Sony bandwagon. After hearing vague reports on the supposed power of PSX2, you're already declaring the Dreamcast dead in the water. Just what the hell do you mean by 'The Dreamcast honeymoon period is over', and 'Dreamcast: Too Little Too Early?'?! You seem to take pleasure in shocking your readers with exaggerated claims and baseless forecasts on how you perceive the next generation to develop.

Also, just what's your problem with Sega software of late? *Sonic Adventure*, a game of staggering technical achievement, gets a pathetic 8/10! Yet, stolid sequels like *Turok 2*, *TOCA 2* and *Tomb Raider II* get 9s! Just what have you guys been smoking lately? *Sega Rally 2*, developed using the sluggish *WinCE* OS yet delivering a near-perfect representation of Model 3, gets heavily condemned for graphical compromises. Do you guys realise that *WinCE* saps 30 per cent of the SH-4's clock cycles and sits on 4Mb of main RAM? What Sega achieved in light of this is nothing short of stunning.

In general your reviews have become totally ridiculous of late, to the point where I simply don't listen any more. I think **Edge** has lost the love of true videogames, in favour of anal, pedantic sim-style games like *Gran Turismo*. Technically *Gran Turismo* is great, but as a videogame it falls way below the level of Namco's and Sega's franchises (*Ridge Racer* and *Sega Rally*). I truly think **Edge** has become jaded, and lost its critical eye for a good game.

'Just what have you guys **been smoking lately?** *Sega Rally 2*, developed using the **sluggish** WinCE OS yet delivering a near-perfect representation of Model 3, gets **heavily condemned** for graphical compromises'

I've always loved **Edge** for its impartiality and in-depth factual news. How about thinking instead of preaching in future.

Stephen Mackintosh,
via email

No, you've always loved **Edge** because it recognises truly classic software, and in the past such things have often carried the Sega brand name. Now that Sega has faltered by producing rushed versions of *Sonic Adventure* and *SR2*, though, you're finding it difficult to deal with. There's nothing wrong with being a die-hard Sega fan, but at the same time you have to maintain some semblance of reason. Which, by claiming that an **Edge** score of 8/10 represents 'pathetic', you are clearly not. Honestly, just *how many times* does **Edge**'s scoring system have to be hammered into your head?

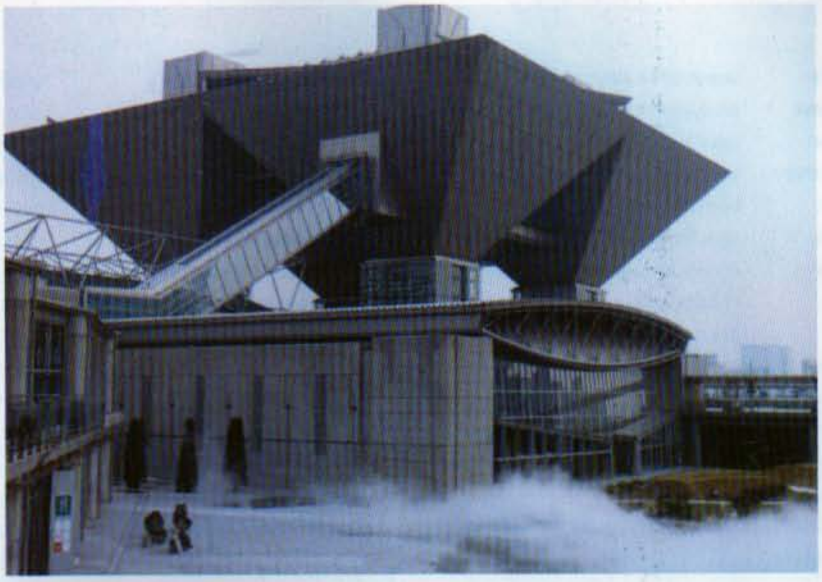
And if *Sega Rally 2* does deliver a near-perfect representation of Model 3 graphics, well, put **Edge** down on the list for some of whatever it is *you're* smoking.

As a software retailer, I'm fed up with people like David Bassett [Letters, **E69**] complaining about games coming out in Japan before they are released here. What does he expect? These games are made initially for the country that they're made in – people like him have no divine right to see them at all. If Mr Bassett were to visit Japan and find a particularly enjoyable new brand of instant noodle, would he then come back here and complain loudly that it's not available in the UK? I think not.

I agree that the delay for games such as *Metal Gear Solid* is frustrating, especially when the game has been available in American for months, but I hear it week in, week out, and I'm getting a bit tired of it, frankly.

Graeme Freestone,
West Midlands

It's also worth noting that Japanese gamers have to wait longer than westerners to see titles such as the *Crash Bandicoot* series – although some might argue that that's not such a bad thing in itself...



To the Japanese gaming community, it all happens here. Next month, **Edge** brings a special report from 1999's Tokyo Game Show, where Sega's Dreamcast is expected to blossom, and developments concerning another certain piece of hardware will come to light…

ISSUE SEVENTY-ONE

ON SALE APRIL 21


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